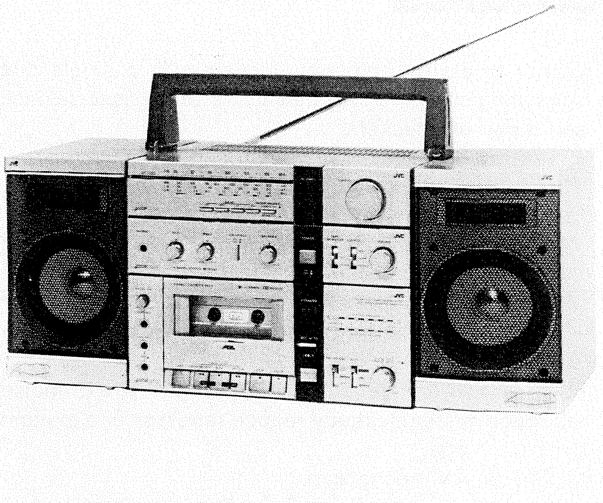
JVC

SERVICE MANUAL

MODEL
PC-3 L/LB
PORTABLE COMPONENT SYSTEM



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OPTIONAL ACCESSORIES

Stereo microphone M-201 (600 Ω)
Headphones H-M11 (32 Ω)
Rechargeable battery pack BP-12K
Charger/AC adapter AA-12LN (for PC-3L), AA-12LBN (for PC-3LB)
Exclusive car adapter CN-332K
Shoulder belt CB-85K
Speakers RB-95K
Carrying case CL-5K

Features

1. Complete stereo component system in a single box consisting of 4 units: a receiver, a stereo cassette deck and a pair of speakers.
   - Compactness and light weight permit use anywhere.
   - Easy portability permits on-the-spot-recording.
2. Metal tape deck with soft-touch mechanism.
   - Incredible low wow & flutter of 0.05 % (WRMS) 0.15% (DIN 45 500).
3. Metal tape compatibility.
   - METAPERM record/play head for high quality performance.
4. Built-in ANRS/DOLBY* B NR, SUPER ANRS noise reduction systems greatly reduce tape hiss and expand dynamic range.
5. MUSIC SCAN mechanism.
   "Under license of Staar S.A., Brussels Belgium".
6. Mixing facility with microphone level control makes possible the desired mixing level.
7. Volume control exclusively for headphones.
8. Timer standby mechanism.
9. Record muting button lets you leave nonrecorded sections.
10. Total output of 40 W (20 W + 20 W) Max. (6 Ω, AC). 15 W per channel at 10% THD (6 Ω, AC).
11. Separate receiver headphones jack.
12. PHONO, AUX jacks provided.
13. 10-cm full-range bass-reflex speaker systems.
14. 4-way power supply (AC, batteries, rechargeable battery pack and car battery).
15. DIN jack for recording and playback.

* "Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Specifications

Cassette Deck PC-D3

Track system	: 4-track 2-channel stereo
Motors	: Electronic governor DC motor for capstan & reel
Heads	: METAPERM head for recording/playback; 2-Gap Ferrite head for erasure
Frequency response	: 30–17,000 Hz (with metal tape) 30–16,000 Hz (with chrome tape) 30–15,000 Hz (with normal tape)
Signal-to-noise ratio	: 54 dB (weighted, at 1 kHz, 3% THD with metal tape) Improved by 5 dB at 1 kHz and by 10 dB at 5 kHz or more with ANRS/DOLBY B NR ON
Effect of Super ANRS (normal tape)	
Improvement of S/N	: The same as with ANRS/DOLBY B NR
Improvement of frequency response	: 0 VU recording; 6 dB at 10 kHz +5 VU recording; 12 dB at 10 kHz
Improvement of distortion	: 0 VU recording; 3% or less at 10 kHz +5 VU recording; 3% or less at 10 kHz
Third harmonic distortion	: 0.5% (metal tape, at 1 kHz)
Wow and flutter	: 0.05% (WRMS) 0.15% (DIN 45 500)
Fast forward time	: Approx. 95 sec (C-60 cassette)
Rewind time	: Approx. 95 sec (C-60 cassette)
Input terminals	: MIC ×2 (Min. input level: 0.3 mV (−70 dBV), Matching impedance: 200 Ω −2 kΩ), LINE IN ×2 (Min. input level: 100 mV/−17 dBs, Input impedance: 47 kΩ) Ext. DC IN (12 V)
Output terminals	: LINE OUT ×2 (Output level: 300 mV/−7 dBs, Output impedance: 5 kΩ), PHONES ×1 (Output level: 0–3 mW/8 Ω, Matching impedance: 8 Ω–1 kΩ), DC OUT ×1 (12 V)
DIN Socket	: Min. input level; 50 mV/−23 dBs Input impedance; 10 kΩ Output level; 300 mV/−7 dBs Output impednace; 4.7 kΩ
Semiconductors	: 6 ICs, 46 transistors
Power sources	: DC 12 V ("R20" ×8, optional BP-12K rechargeable battery pack), EXT DC (car battery via optional CN-332 car adapter)
Dimensions	: 270(W)×110(H)×218(D) mm (10-3/4″ × 4-3/8″ × 8-5/8″) including pads and knobs
Weight	: Approx. 3.4 kg (7.5 lbs) with batteries Approx. 2.6 kg (5.7 lbs) without batteries

Receiver PC-R3

Frequency ranges	: FM	88–108 MHz
	AM	540–1600 kHz
	LW	150–350 kHz
	SW	6–18 MHz

FM tuner section

Usable sensitivity	: 2.8 μV/75 Ω
Signal-to-noise ratio	: 60 dB (MONO)
Total harmonic distortion	: 0.3 % (1 kHz)
Capture ratio	: 2.0 dB
Selectivity	: 40 dB
Stereo separation	: 40 dB (1 kHz)
Frequency response	: 25–15,000 Hz
Atnennas	: Telescopic antenna ×1 Ext. antenna terminal (300 Ω)

AM tuner section

Sensitivity AM	: 250 μV/m (IEC)
LW	: 398 μV/m (IEC)
SW2	: 28 μV/m (IEC)
Signal-to-noise ratio	: 45 dB
Selectivity	: 30 dB
Antenna	: Telescopic antenna (SW), Ferrite core antenna (AM, LW)

Amplifier section

Circuity	: BTL-connected SEPP circuit
Power output	: Max. 40 W (20 W + 20 W) (6 Ω, AC) 15 W per channel at 10% THD
Frequency response	: 30 Hz to 30,000 Hz (±3 dB)
Signal-to-noise ratio	: 75 dB (new IHF)
Tone control	: Bass ±8 dB (100 Hz), Treble ±8 dB (10 kHz)
Input terminals	: PHONO ×2 (3 mV/47 kΩ), AUX ×2 (300 mV/68 kΩ), TAPE PLAY ×2 (300 mV/68 kΩ)
Output terminals	: TAPE REC ×2 (300 mV/10 kΩ), SPEAKER ×2 (matching impedance 6 Ω), PHONES ×1 (Output level: 0–3 mW/8 Ω, Matching impedance: 8–1 kΩ) DC OUT ×1 (12 V, switched)
Semiconductors	: 6 ICs, 23 transistors
Power sources	: AC 240/220/110 V, 50/60 Hz DC 12 V (supplied from the deck; car battery via optional CN-332 car adapter)
Power consumption	: 85 watts
Dimensions	: 270(W)×110(H)×229(D) mm (10-3/4″×4-3/8″×9-1/8″) including pads and knobs
Weight	: Approx. 3.5 kg (7.7 lbs)

Speaker PC-B3

Type	: Full-range bass reflex system (book-shelf type)
Speaker units	: 10 cm (4″) cone
Impedance	: 6 Ω
Playback frequency response	: 75–17,000 Hz
Output sound pressure level	: 90 dB/W/m
Rated input	: 15 watts
Maximum input	: 25 watts
Dimensions	: 124(W)×218(H)×206(D) mm (5″×8-5/8″×8-1/8″) including pads
Weight	: Approx. 2.0 kg (4.4 lbs)

System PC-3

Power sources	: AC 240/220/110 V, 50/60 Hz
Dry batteries	: DC 12 V ("R20" ×8)
Rechargeable battery pack	: DC 12 V (optional BP-12K)
Car battery	: DC 12 V via optional CN-332 car adapter
Power consumption	: 85 watts
Dimensions	: 524(W)×294(H)×258(D) mm (20-3/4″×11-5/8″×10-1/4″) including pads, knobs, handle with all components joined with provided fixtures
Weight	: Approx. 11.4 kg (25.1 lbs) (including fixtures and batteries)

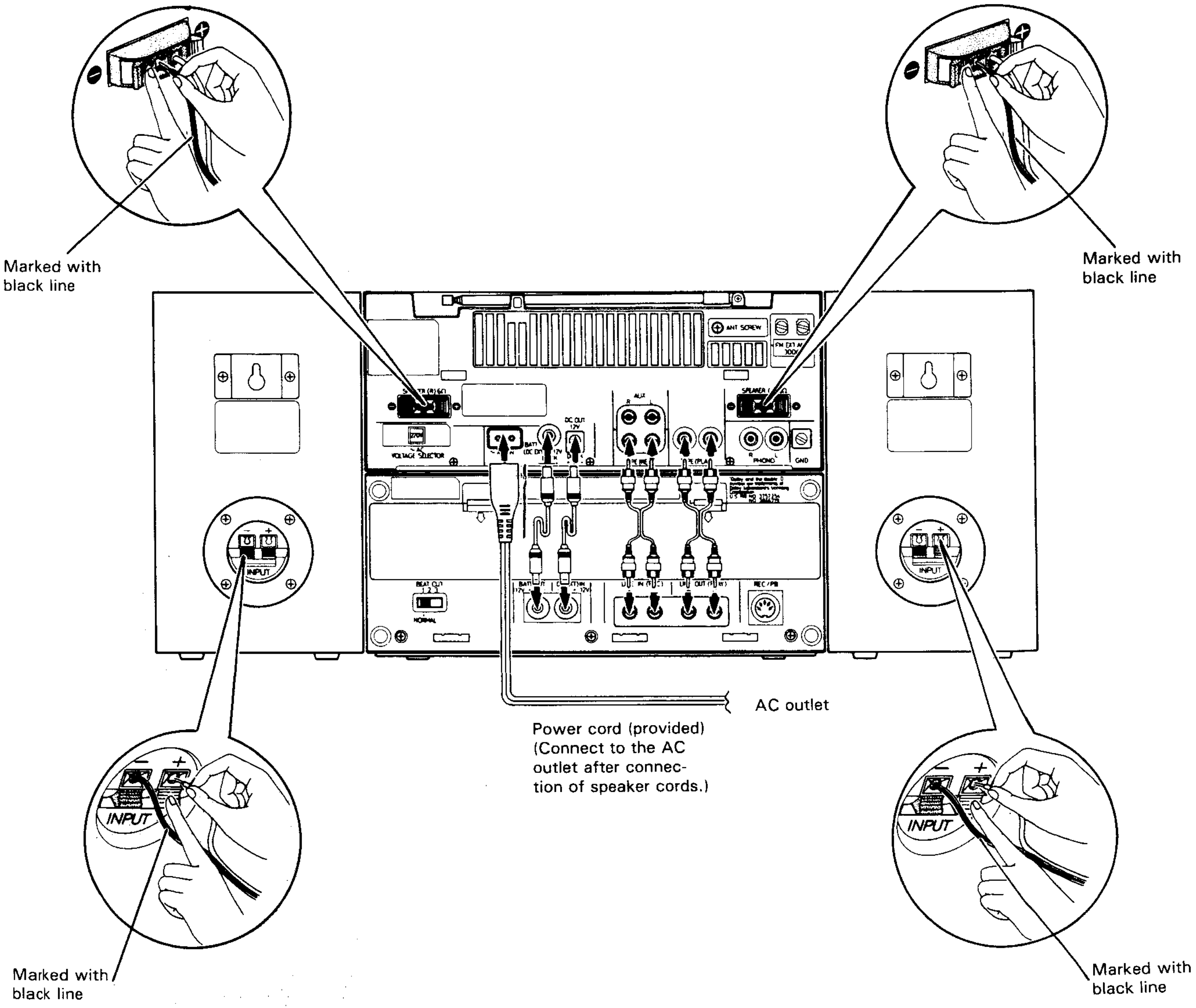
Design and specifications are subject to change without notice.

Connections (1)

- Do not switch the power on until all the connections are completed.
- The pin cords and the DC power cords were already connected between the stereo receiver and between the amplifier and the deck. If any are disconnected, refer to this diagram for proper connection.

Connection of Speaker Cord

Regarding the speaker cords, be sure to connect the same channels, (L) to (L) and (R) to (R), or the same polarities, (+) to (+) and (−) to (−). Further, connect to the (−) terminal the wire marked with a black line. Because reversed connection of (+) and (−) causes degraded stereo feeling and sound quality.



Marked with black line

Marked with black line

AC outlet

Power cord (provided) (Connect to the AC outlet after connection of speaker cords.)

Marked with black line

Marked with black line

Fig. 1

Notes: 1. When the AC power cord is plugged in, the batteries are automatically disconnected.
2. When not using batteries for a long period, remove the batteries to prevent corrosion due to battery leakage.

Connections (2)

- * **Fixing the FM outdoor antenna in the direction that the highest antenna sensitivity can be obtained.**

  While listening to an FM broadcast, detect the best FM receiving direction by turning the antenna in different directions.
  - To seek the direction that the multipatch transmission* is smallest, move the antenna in the direction that distorted sounds and noises are smallest, while listening to relatively large sounds with the TREBLE knob to MAX and the BASS knob to MIN.

    Note: * **Multipath transmission causes distortion in radio and ghost images in television. In this phenomenon, waves are reflected from mountains, buildings or other obstacles and arrive at the radio receiving antenna slightly delayed.**

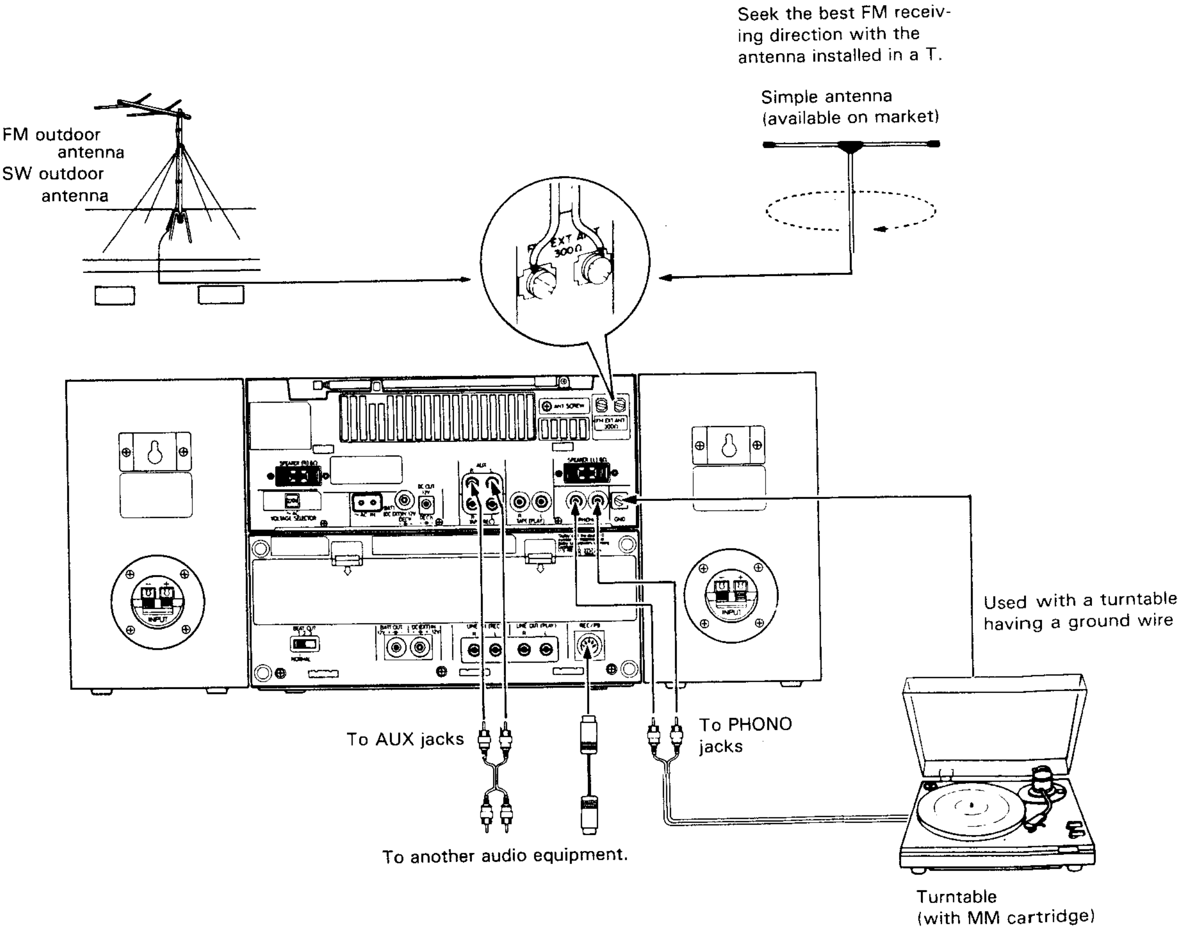

Seek the best FM receiving direction with the antenna installed in a T.
Simple antenna (available on market)
FM outdoor antenna
SW outdoor antenna
EXT ANT 300Ω
Used with a turntable having a ground wire
To AUX jacks
To PHONO jacks
To another audio equipment.
Turntable (with MM cartridge)

Fig. 2

- Concerning any connection cord, be sure to connect the same channels, (L) to (L) and (R) to (R), and positively insert each pin plug to the pertinent jack. Incomplete insertion may cause no sound to be emitted or noise to occur.

Various Usage

Installation of Speaker Sections
Removing and Mounting of Speaker Joint Fixtures

1. Align Ⓑ (screws for joint) and slide the speaker box down to secure it at part Ⓐ as illustrated.
2. Join the other speaker in the same manner as above.

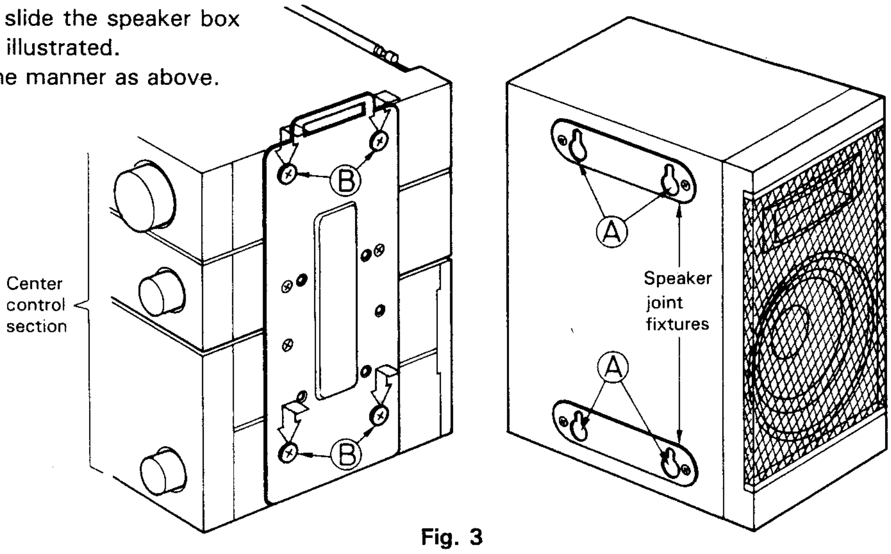

Ⓑ
Ⓑ
Center control section
Ⓐ
Ⓐ
Speaker joint fixtures

Fig. 3

Mounting the Handle

1. Push the handle grip lock up, in the direction of arrow ①.
2. Pressing mark △ in the direction of arrow ②, secure the handle grip to the slot indicated by arrow ③.
3. Push the hand grip lock down to close it.
   Close the other hand grip lock in the same manner.

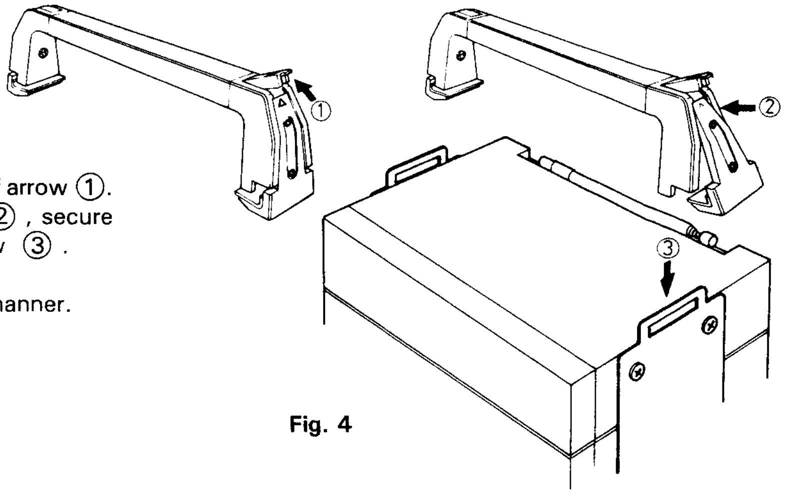


Fig. 4

Mounting of Rear Cover

Insert the rear cover (lower) to 3 holes of the deck, and then pushing the direction of the arrow mark, insert the rear cover (upper) to 2 holes of the stereo receiver.

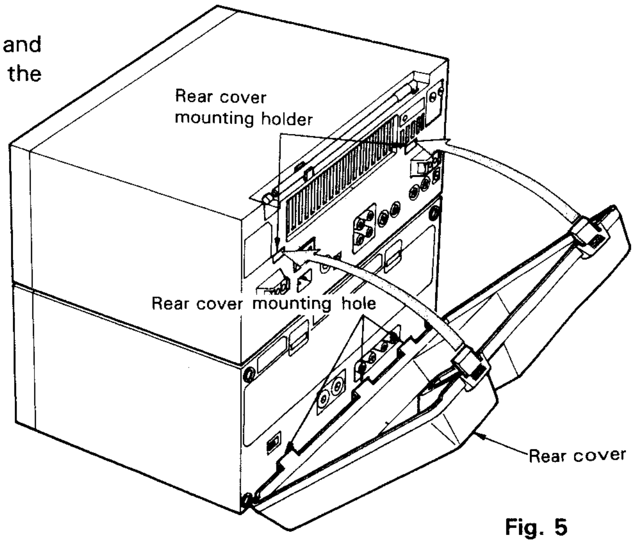

Rear cover mounting holder
Rear cover mounting hole
Rear cover

Fig. 5

Removal of Center Control Section Joint Fixture (Frame)

Remove all the screws. (left & right, earch 7p.c.s.)

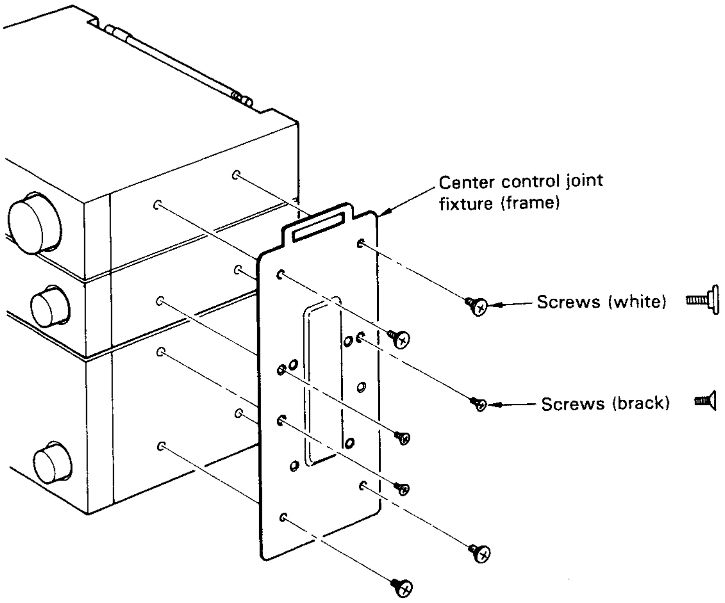

Center control joint fixture (frame)
Screws (white)
Screws (brack)

Fig. 6

When Using as a Portable Deck

First remove the frames as mentioned above and fix the handle to both sides of the deck as shown.

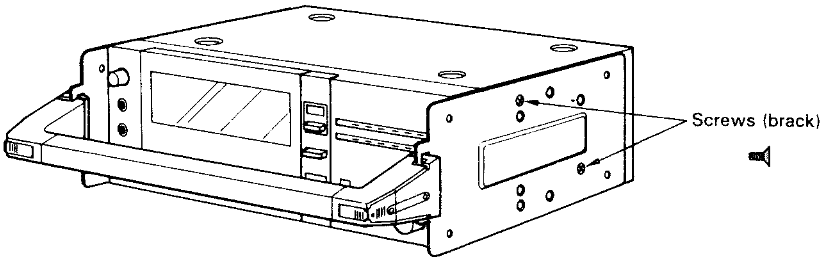

Screws (brack)

Fig. 7

When using as a portable deck, use the power source as follows:

Outdoor; Drive batteries ("D" × 8)
Rechargeble battery pack BP-12K (optional)
In a car; Exclusive car adapter CN-333K (optional)

Indoor; Dry batteries
Rechargeble battery pack BP-12K (optional)
AC adapter AA-12LN (for PC-3L) } (Optional)
AA-12LBN (for PC-3LB)

Connect the exclusive car adapter or AC adapter to the DC (EXT) IN jack on the rear panel.

Names of Parts

Stereo Receiver and Speakers Unit

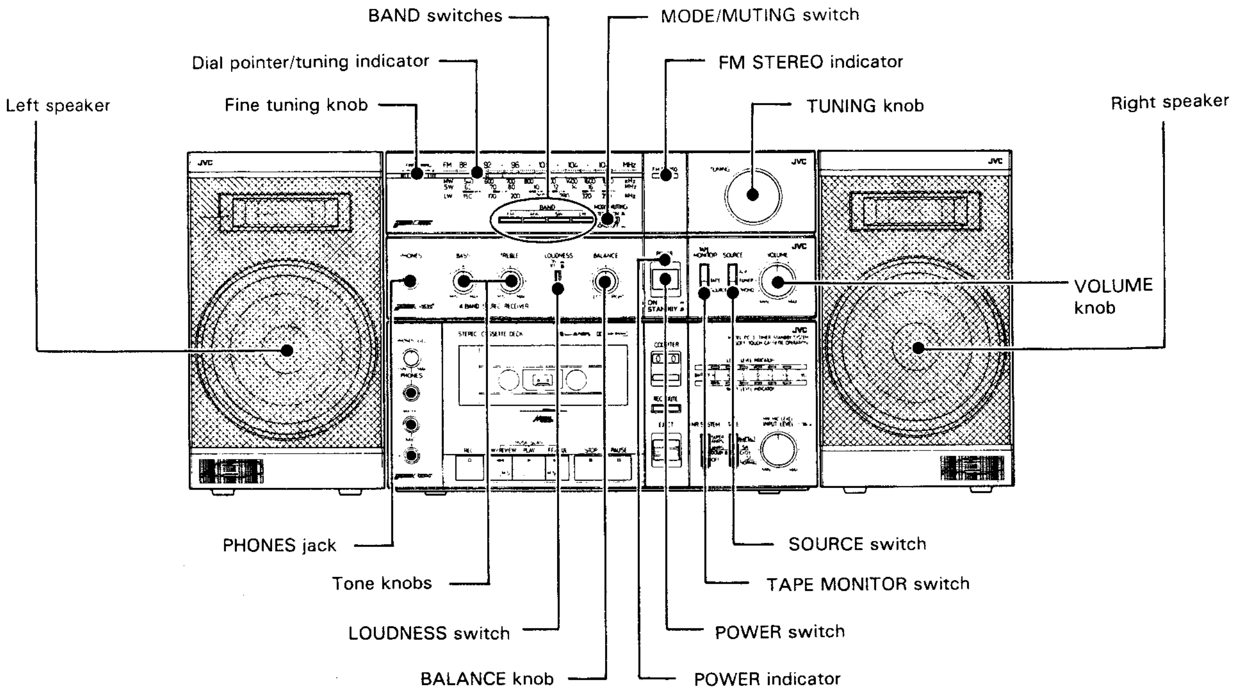

BAND switches
MODE/MUTING switch
Dial pointer/tuning indicator
FM STEREO indicator
Left speaker
Fine tuning knob
TUNING knob
Right speaker
VOLUME knob
PHONES jack
Tone knobs
LOUDNESS switch
BALANCE knob
SOURCE switch
TAPE MONITOR switch
POWER switch
POWER indicator

Fig. 8

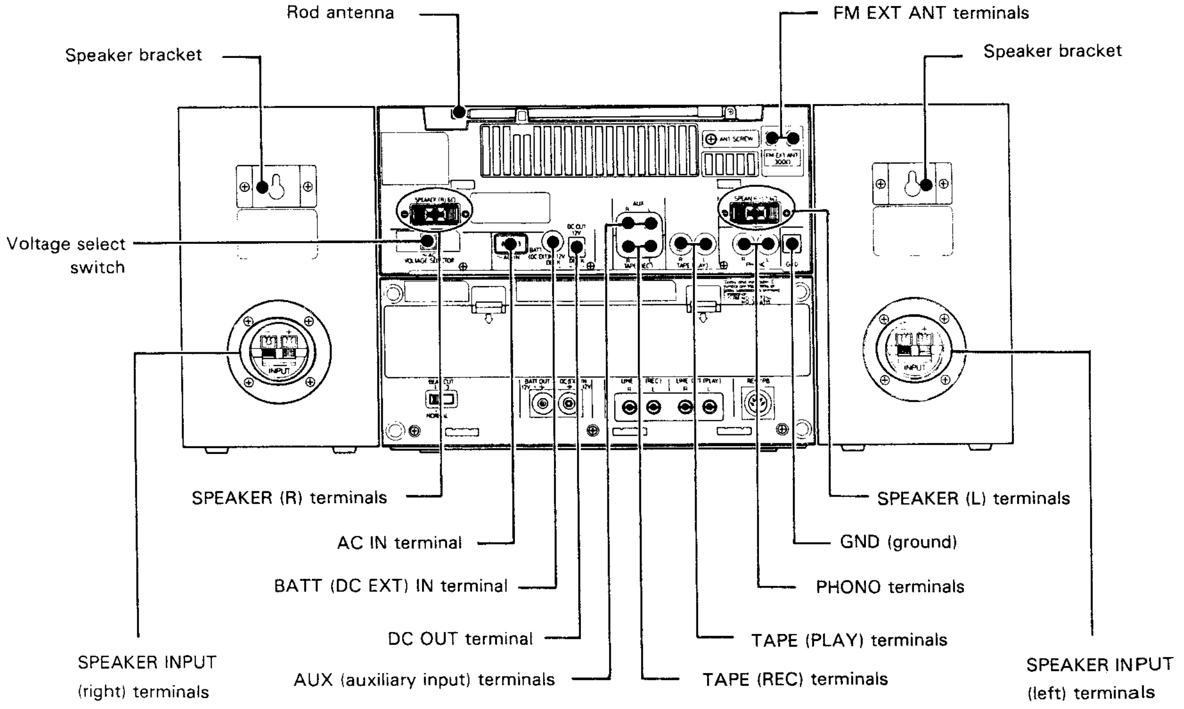

Rod antenna
FM EXT ANT terminals
Speaker bracket
Speaker bracket
Voltage select switch
SPEAKER (R) terminals
AC IN terminal
BATT (DC EXT) IN terminal
DC OUT terminal
AUX (auxiliary input) terminals
SPEAKER INPUT (right) terminals
SPEAKER (L) terminals
GND (ground)
PHONO terminals
TAPE (PLAY) terminals
TAPE (REC) terminals
SPEAKER INPUT (left) terminals

Fig. 9

Stereo Cassette Deck

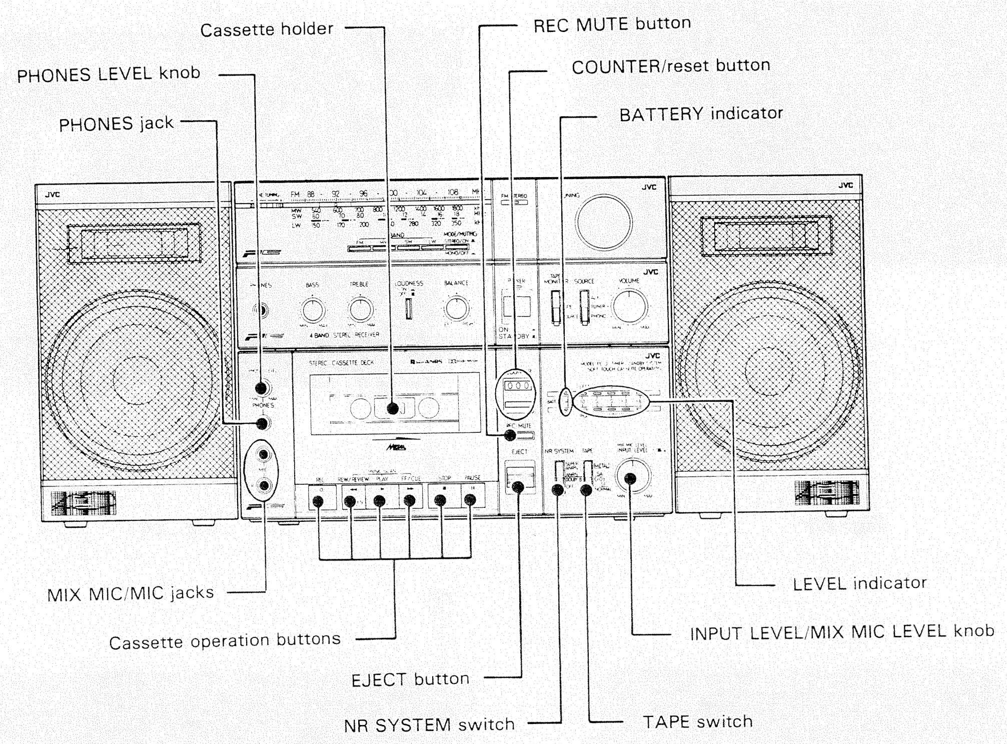

Cassette holder
PHONES LEVEL knob
PHONES jack
REC MUTE button
COUNTER/reset button
BATTERY indicator
MIX MIC/MIC jacks
Cassette operation buttons
EJECT button
NR SYSTEM switch
LEVEL indicator
INPUT LEVEL/MIX MIC LEVEL knob
TAPE switch

Fig. 10

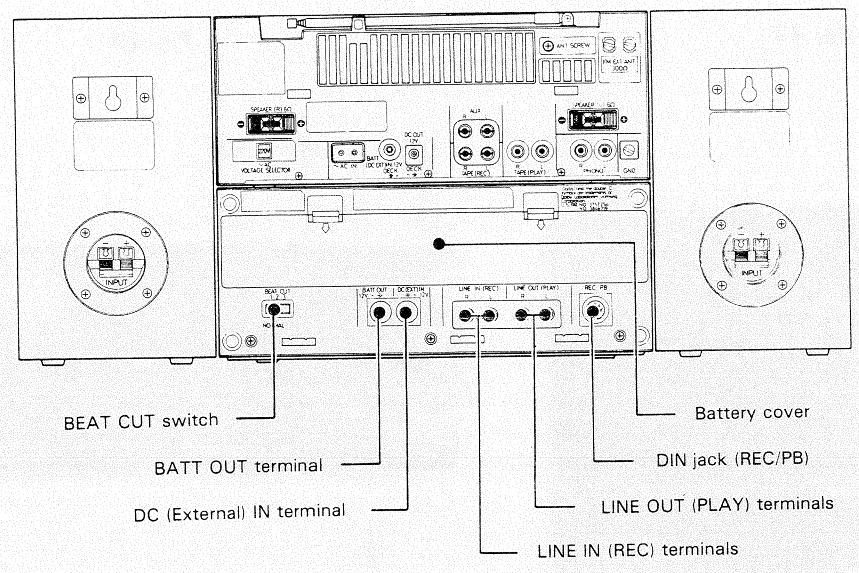

BEAT CUT switch
BATT OUT terminal
DC (External) IN terminal
Battery cover
DIN jack (REC/PB)
LINE OUT (PLAY) terminals
LINE IN (REC) terminals

Fig. 11

Main Parts Location

Stereo receiver

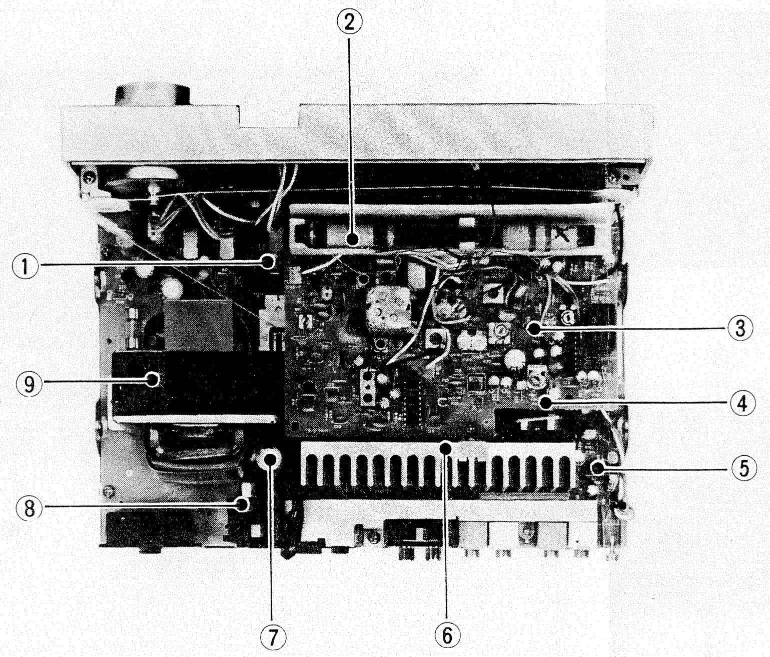


Fig. 12

① Power switch
② Bar antenna
③ Tuner P.W.B. ass'y
④ Diode P.W.B. ass'y
⑤ Amp. P.W.B. ass'y
⑥ Heat sink
⑦ AC socket
⑧ Fuse
⑨ Power transformer

Stereo cassette deck

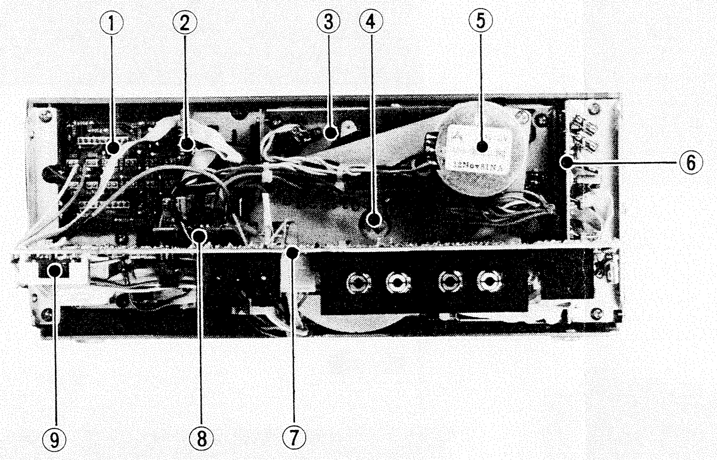


Fig. 13

① Level indicator P.W.B. ass'y
② Auto stop P.W.B. ass'y
③ Cassette Mecha. ass'y
④ Flywheel ass'y
⑤ Motor
⑥ Mic and headphone P.W.B. ass'y
⑦ Cassette amp. P.W.B. ass'y
⑧ Mecha. control P.W.B. ass'y
⑨ Beat cut switch

How to Removing

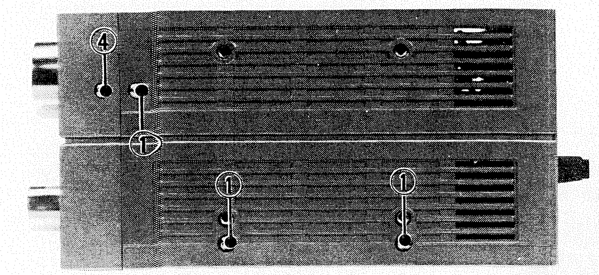


Fig. 14

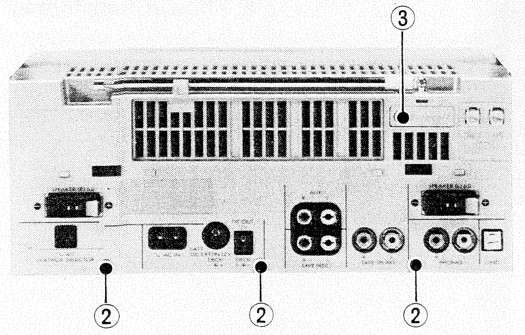


Fig. 15

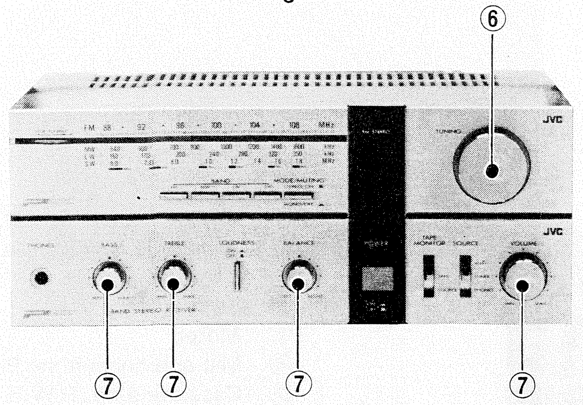


Fig. 16

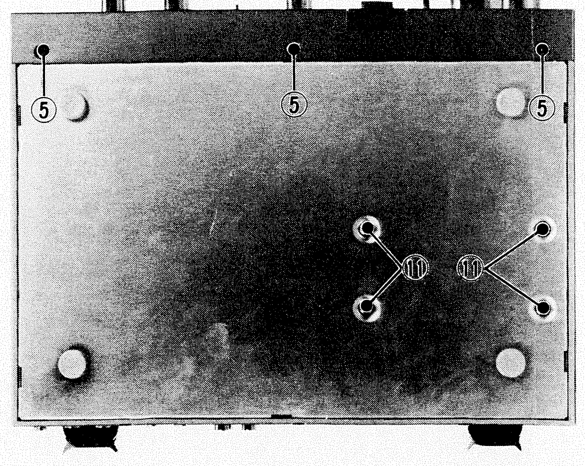


Fig. 17

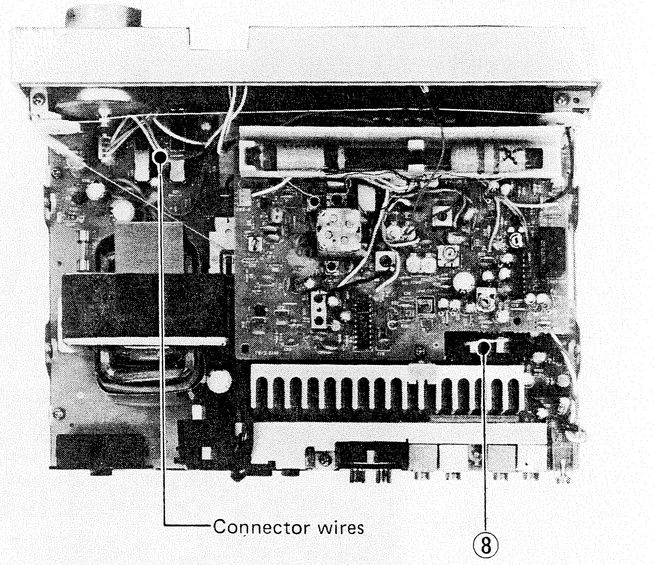

Connector wires
⑧

Fig. 18

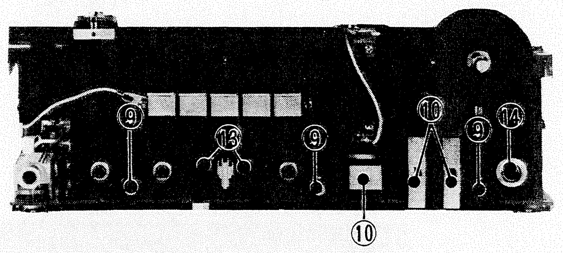


Fig. 19

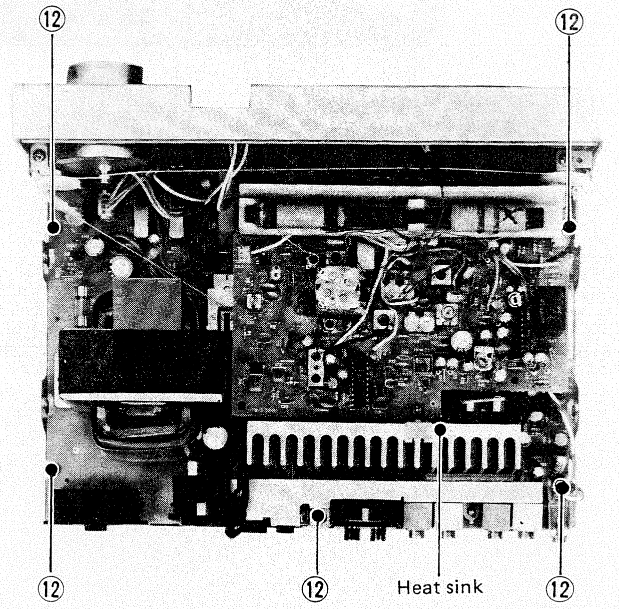

⑫
⑫
⑫
⑫
Heat sink
⑫

Fig. 20

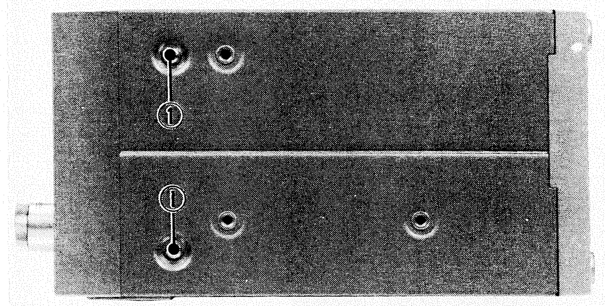


Fig. 21

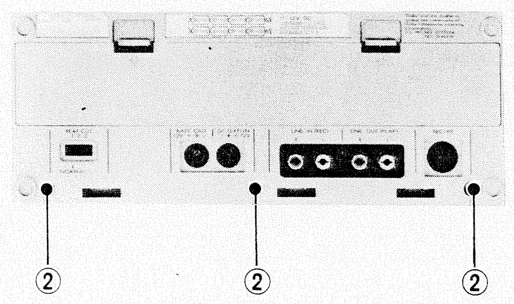


Fig. 22

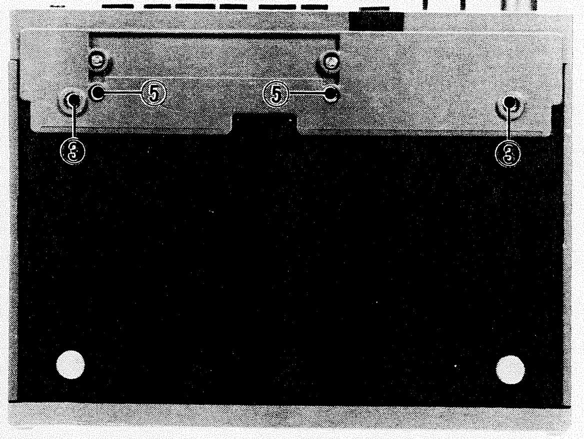


Fig. 23

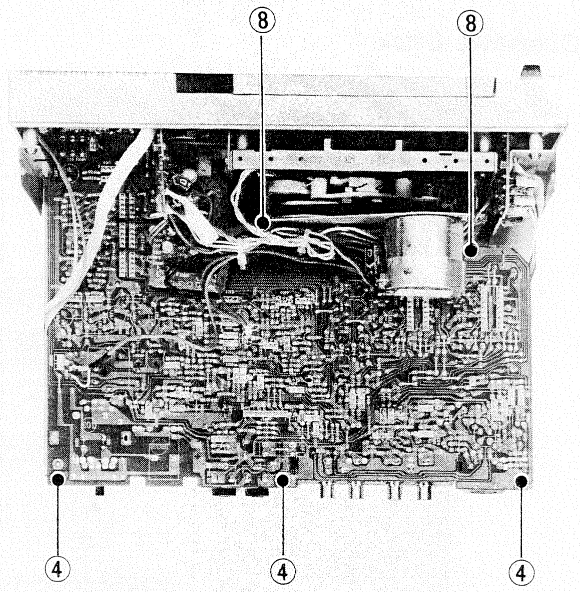


Fig. 24

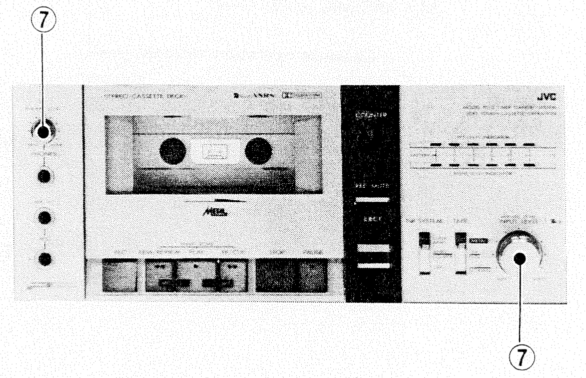


Fig. 25

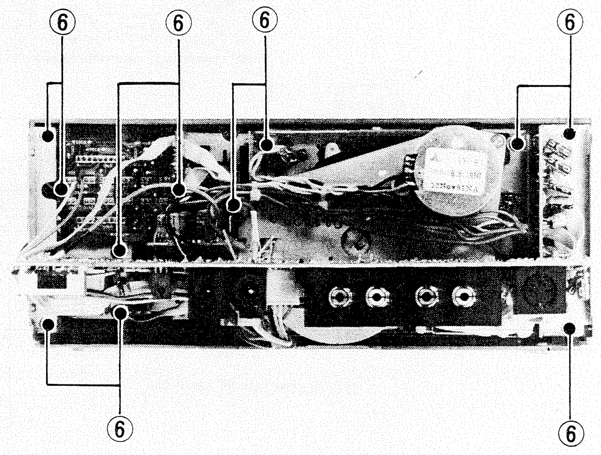


Fig. 26

Removement should be performed in the order of steps 1, 2, 3 ......

Stereo receiver parts

1. Rod antenna (Fig. 15)
   To remove the rod antenna only, remove a screw ③ = SDSB3008R fixing the antenna holder.
   (Need not removing the top cover.)

2. Top cover (Fig. 14, 15)
   (1) Remove 11 screws = SHSP3006R fixing the top cover. (both sides ① and rear ②)
   (2) Remove the receptacles of antenna wires from tuner P.W. board. (orange ... TP1, white ... TP2)
   (3) Remove the speaker wires.

3. Front cover (Fig. 14, 17)
   (1) Remove 7 screws = SHSP3006R fixing the front cover. (left and right sides, – each 2 p.c.s. ④ on bottom, – 5 p.c.s. ⑤)
   (2) Remove the tuning knob ⑥ and 4 VR knobs ⑦.

4. Tuner P.W.B. ass'y (Fig. 18, 19)
   (1) Remove a screw ⑧ = SBSB3006Z fixing the tuner P.W. board.
   (2) Remove 3 screws ⑨ = SSSP3006Z, 2 screws ⑬ = LPSP3006Z and VR nut ⑭ on the front of chassis.
   3) Remove 2 bar cap ⑩ of the power switch and disconnect the wires connector.

5. Amplifier P.W.B. ass'y (Fig. 17, 20)
   (1) Remove 4 screws ⑪ = SPSP4004Z on the bottom.
   (2) Remove 5 screws ⑫ = SBSB3008C on the P.W. board.

6. Power ICs
   (1) Unsolder the power ICs and Q301 transistor on the P.W. board.
   (2) Remove 3 screws fixing the heat sink and remove it with ICs.

   (3) Remove 4 screws fixing the power ICs.
   (When reassembling the power ICs, apply the sillicon grease (G746) to the heat sink.)

Stereo cassette deck parts

1. Top cover (Fig. 21, 22)
   (1) Remove 4 screws ① = SDSP3006R fixing on the left and right sides of top cover.
   (2) Remove 3 screws ② = SDSP3006R fixing on the rear of top cover.
   (3) After opening the top cover, remove the receptacles of battery 2 wires (red ... ⊕, brack ... ⊖).

2. Bottom cover (Fig. 23, 24)
   (1) Remove 2 screws ③ = SDSP3006R fixing the bottom cover.
   (2) Remove 3 screws ④ = LPSP3006C fixing the cassette amp. P.W. Board (on the pattern side).

3. Front cover (Fig. 23, 25, 26)
   (1) Remove 2 screws ⑤ = SDSP3006R fixing the front cover on the bottom side.
   (2) Remove 11 screws ⑥ = SBSF3010C fixing the front cover on the rear side.
   (3) Remove 2 knobs ⑦.
   (4) To open the cassette door, push the EJECT button, and then remove the front cover.

4. Mechanical assembly (Fig. 24)
   (1) Remove 2 screws ⑧ = SPSP3006V.
   (2) Disconnect the wire connector.

Removal of Mechanical Parts

Refer to mechanical component parts on page 44.

Remove in the following sequence

1. Pinch roller ass'y ① (Fig. 27)
   Remove an E ring ② with a pinch roller spring ③.
2. Supply reel disk and take up reel disk (Fig. 26)
   (1) Remove 2 reel stopper ④ ⑤.
   (2) When removing the take up reel, remove the counter belt ⑥.
   (When reassembly the reel disk, the stopper use a new parts — it cannot use again —)
3. Tape counter (Fig. 27)
   Remove the counter belt and remove the tape counter pressure position by minus driver etc.
4. Buttons case unit ⑦ (Fig. 27)
   Remove 2 screws ⑧.
5. REC/PB head (Fig. 28)
   Remove the buttons case and 2 screws ⑨, and then unsolder REC/PB head P.W. board.
6. Erase head (Fig. 28)
   Remove 2 screws and unsolder E head P.W. board.
7. Motor (Fig. 29)
   To remove the FM bracket ⑩, remove 4 screws ⑪. Remove the capstan belt, remove 3 screws ⑫ fixing the motor.
8. Mecha. control P.W.B. and Auto Stop P.W.B. (Fig. 28)
   Remove 2 screws ⑬ — Mecha. Control P.W.B.
   Remove 2 screws ⑭ — Auto Stop P.W.B.
9. Flywheel ass'y (Fig. 29, 30)
   Remove the FL bracket and the capstan belt. Remove 3 washers ⑮ ⑯ ⑰.
   (Be careful not to stain the belt)
10. Main base ass'y ⑱ and disk base unit ⑲ (Fig. 30, 31)
    Remove a screw ⑳ fixing the pack spring ㉑
    Remove 2 screws ㉒.

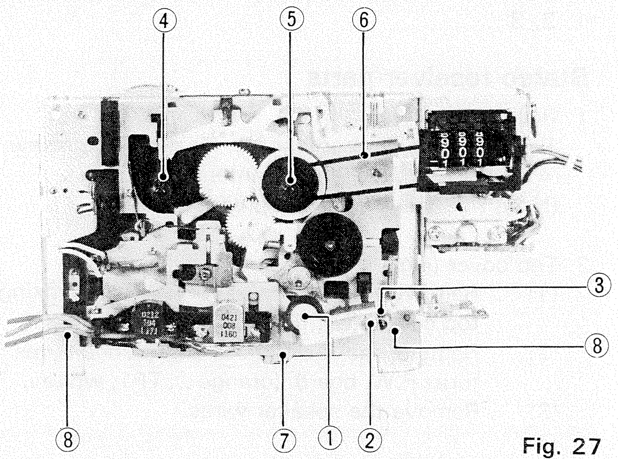


Fig. 27

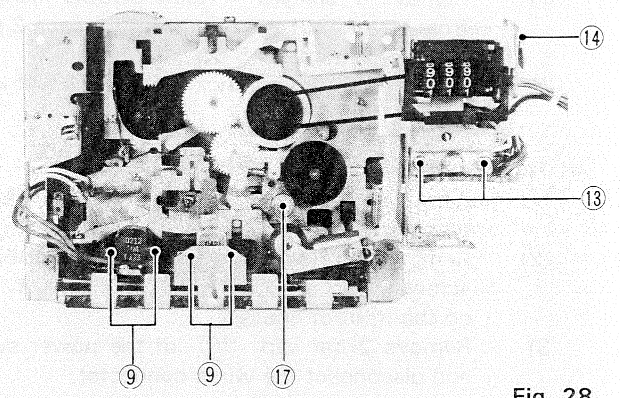


Fig. 28

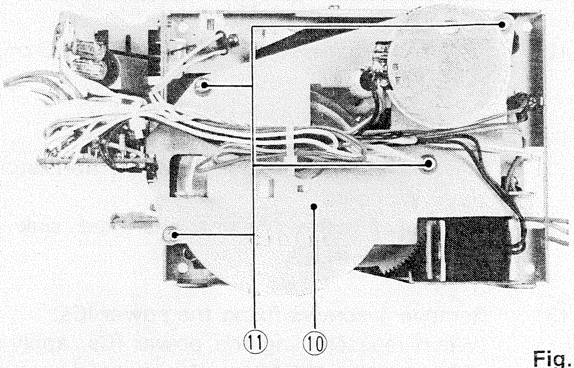


Fig. 29

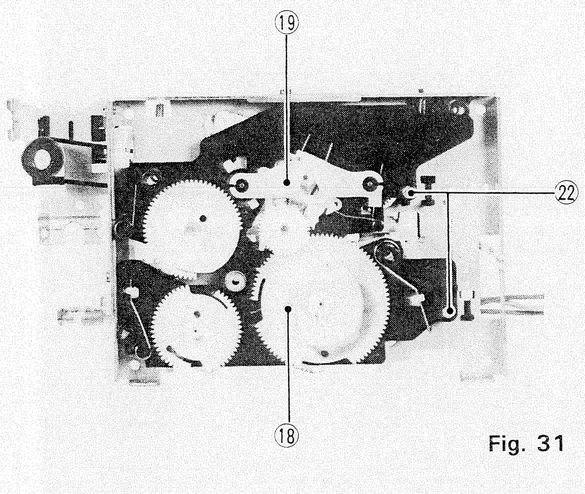


Fig. 31

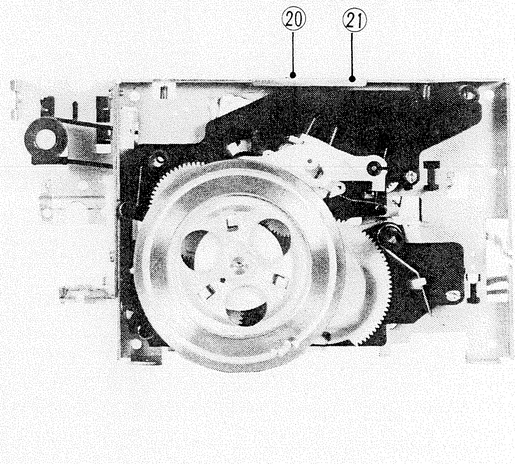
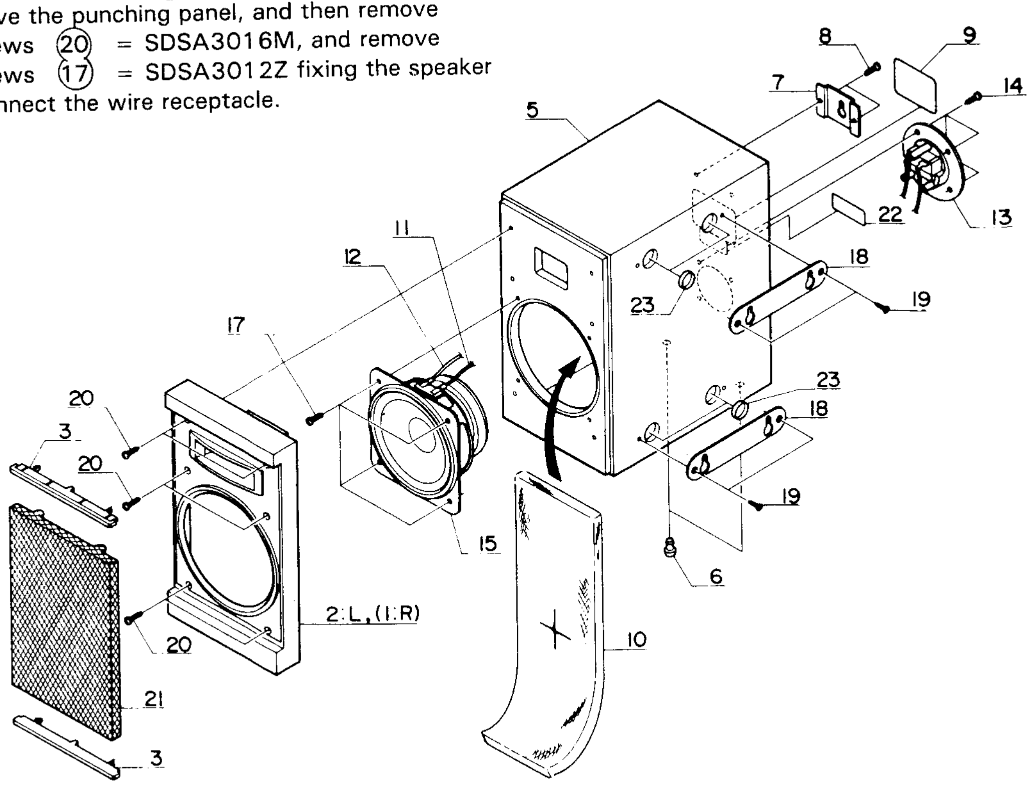
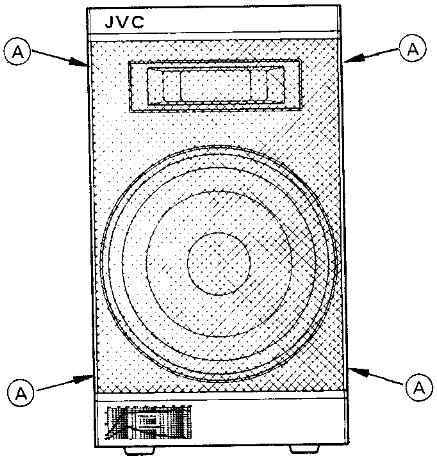


Fig. 30

Removal of the Speaker parts

1. Removing the punching panel ㉑
   (1) To remove the cement, insert the cutting knife to clearance of the punching panel from the front panel rib.
   (2) Remove Ⓐ points of the punching metal by the pin cette etc.
   Note: Be careful not to broke its panel form.
2. Removing the speaker ⑮
   (1) Remove the punching panel, and then remove
   6 screws ⑳ = SDSA3016M, and remove
   4 screws ⑰ = SDSA3012Z fixing the speaker
   (2) Disconnect the wire receptacle.


8
9
7
14
5
22
13
11
12
18
17
23
19
20
3
20
23
18
19
15
6
2:L,(1:R)
10
20
21
3



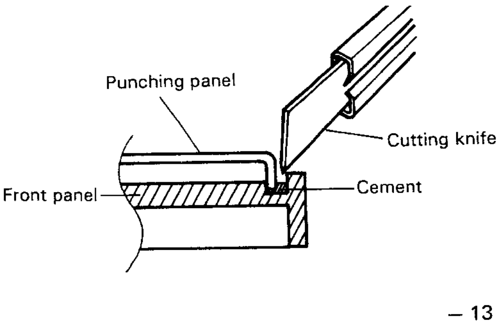

Punching panel
Cutting knife
Front panel
Cement

Fig. 32

How to Engage Dial Cord

1. Turn the dial drum fully counterclockwise (to the lowest frequency).
2. Use Kevlar cord (1120 mm long and 0.5 mm in diameter).
3. Install the string in the sequence of the numbers.

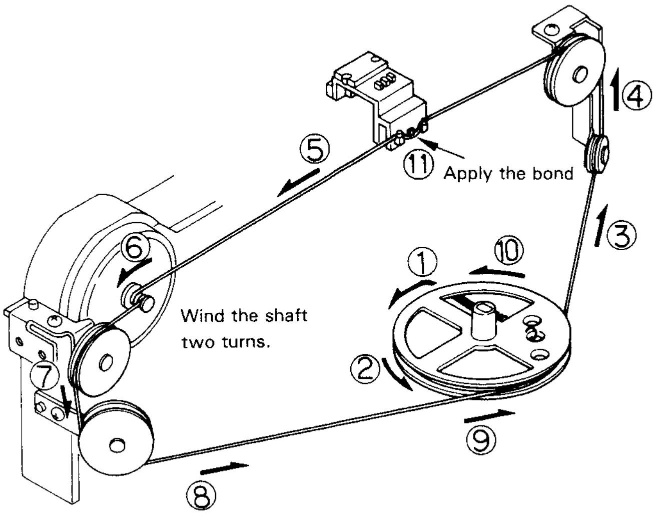
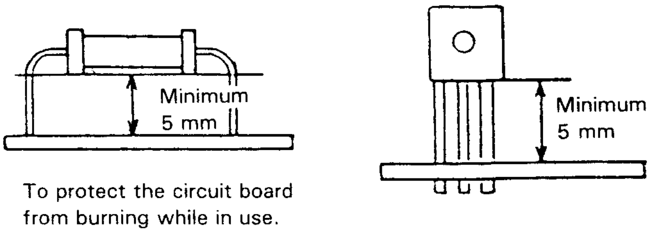


Fig. 33

Safety Precautions

⚠ Safety mark

Safety is very important with this unit. When replacing the parts marked ⚠, be sure to use only those designated parts. The designated resistors, diodes, transistors become hot in use. When replacing, be sure to secure them with a distance of more than 5 mm from the circuit board. In addition, they are banded together to avoid touching other wiring, recheck this point as well after repair.
The wiring of the primary side should be wound more than one and half times, then soldered.



To protect the circuit board from burning while in use.

Fig. 34

Block Diagrams

Tuner Circuit

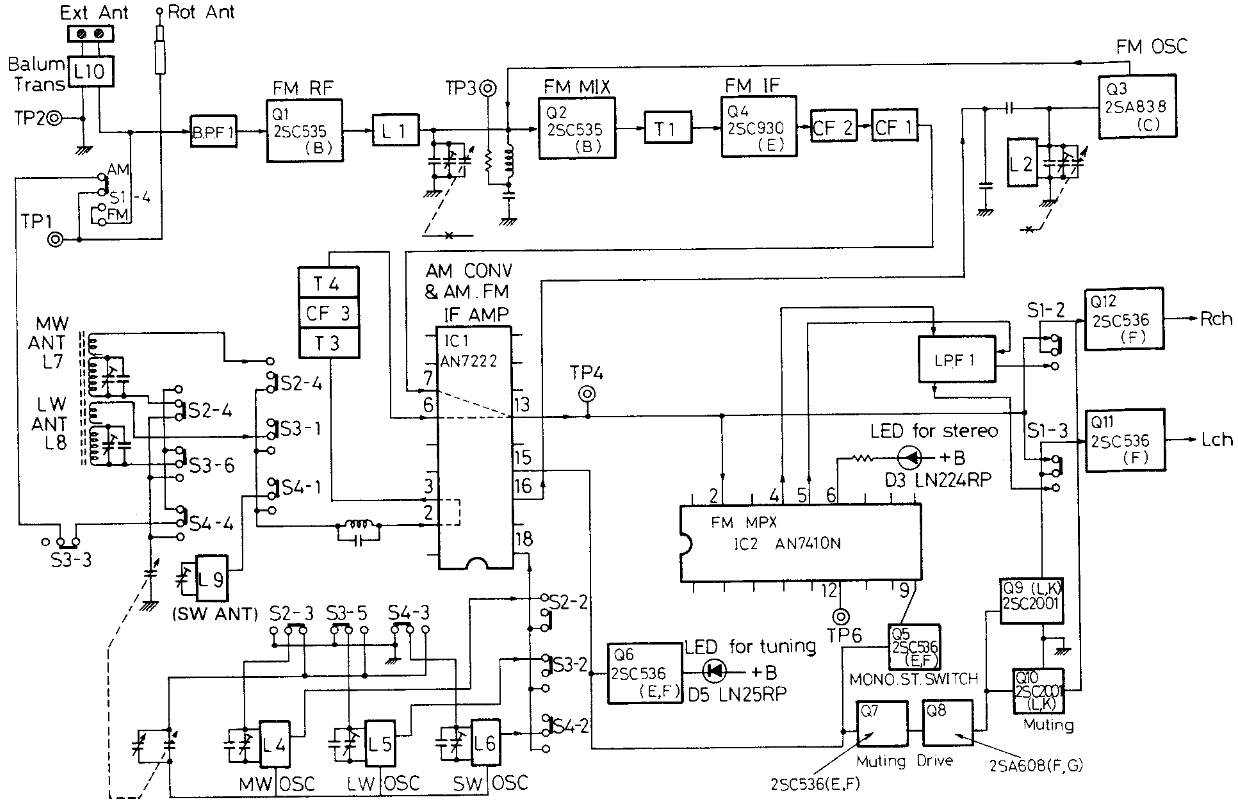

Ext Ant
Rot Ant
Balum Trans
L10
TP2
TP1
AM
S1-4
FM
BPF1
FM RF
Q1
2SC535
(B)
L1
TP3
FM MIX
Q2
2SC535
(B)
T1
FM IF
Q4
2SC930
(E)
CF 2
CF 1
FM OSC
Q3
2SA838
(C)
L2
T4
CF 3
T3
AM CONV
& AM.FM
IF AMP
IC1
AN7222
7
6
13
3
2
15
16
18
TP4
MW
ANT
L7
LW
ANT
L8
S2-4
S2-4
S3-1
S3-6
S4-1
S4-4
S3-3
L9
(SW ANT)
S2-3
S3-5
S4-3
S2-2
S3-2
S4-2
L4
L5
L6
MW OSC
LW OSC
SW OSC
LPF 1
S1-2
Q12
2SC536
(F)
Rch
S1-3
Q11
2SC536
(F)
Lch
LED for stereo
+B
D3 LN224RP
2
4
5
6
FM MPX
IC2 AN7410N
12
9
TP6
Q5
2SC536
(E,F)
MONO.ST. SWITCH
Q6
2SC536
(E,F)
LED for tuning
+B
D5 LN25RP
Q7
Q8
Muting
Drive
2SC536(E,F)
2SA608(F,G)
Q9 (L,K)
2SC2001
Q10
2SC2001
(L,K)
Muting

Fig. 35

Amplifier Circuit

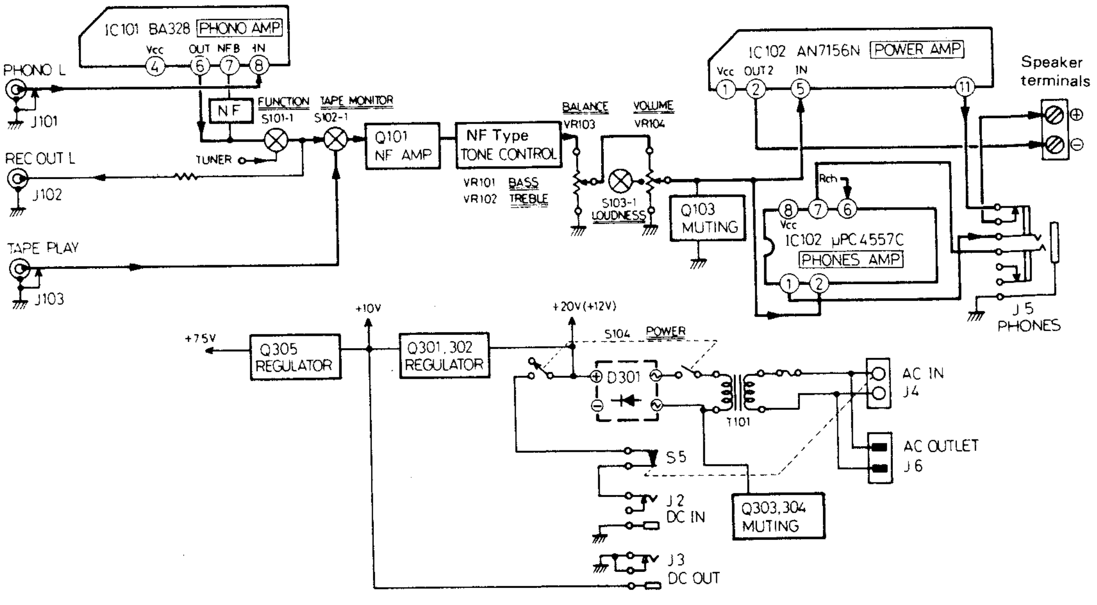

IC101 BA328 PHONO AMP
Vcc
OUT
NFB
IN
4
6
7
8
PHONO L
J101
NF
FUNCTION
S101-1
TAPE MONITOR
S102-1
TUNER
REC OUT L
J102
TAPE PLAY
J103
Q101
NF AMP
NF Type
TONE CONTROL
VR101 BASS
VR102 TREBLE
BALANCE
VR103
VOLUME
VR104
S103-1
LOUDNESS
Q103
MUTING
IC102 AN7156N POWER AMP
Vcc
OUT2
IN
1
2
5
11
Speaker terminals
⊕
⊖
Rch
8
7
6
Vcc
IC102 µPC4557C
PHONES AMP
1
2
J5
PHONES
+7.5V
Q305
REGULATOR
+10V
Q301, 302
REGULATOR
+20V(+12V)
S104 POWER
D301
T101
AC IN
J4
AC OUTLET
J6
S5
J2
DC IN
Q303, 304
MUTING
J3
DC OUT

Fig. 36

Stereo Cassette Deck

Recording system

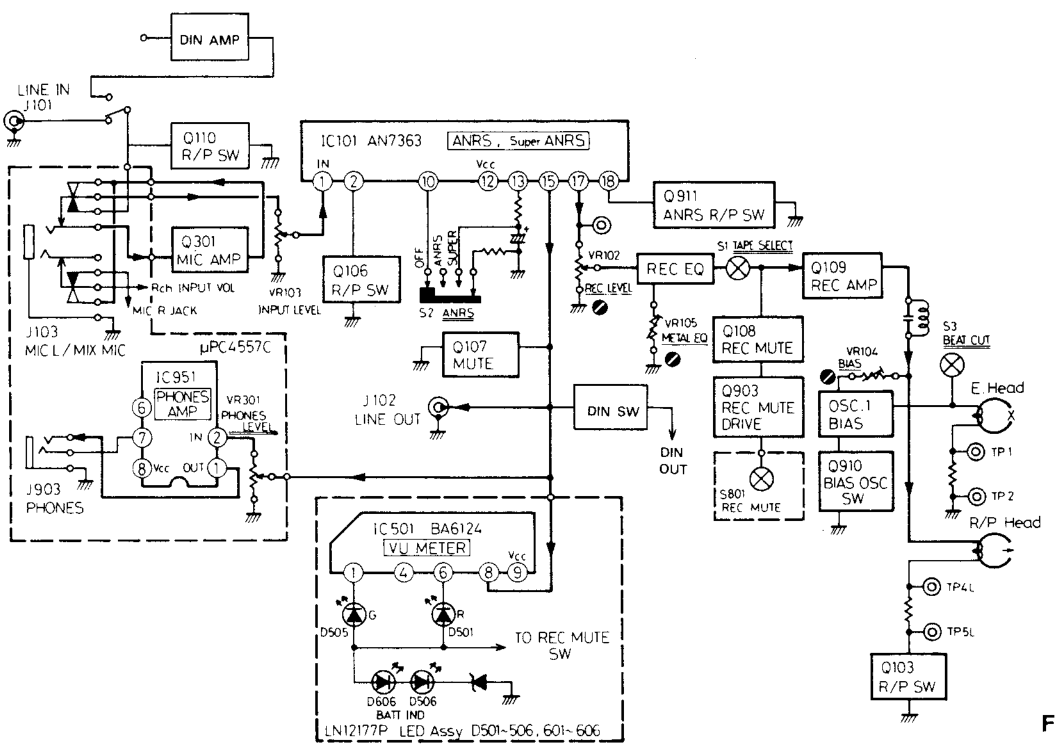

DIN AMP
LINE IN
J101
Q110
R/P SW
IC101 AN7363
ANRS, Super ANRS
IN
Vcc
Q911
ANRS R/P SW
Q301
MIC AMP
Rch INPUT VOL
MIC R JACK
VR103
INPUT LEVEL
Q106
R/P SW
OFF
ANRS
SUPER
S2 ANRS
VR102
REC LEVEL
REC EQ
S1 TAPE SELECT
Q109
REC AMP
VR105
METAL EQ
Q108
REC MUTE
S3
BEAT CUT
VR104
BIAS
E. Head
J103
MIC L / MIX MIC
μPC4557C
IC951
PHONES AMP
VR301
PHONES LEVEL
IN
Vcc
OUT
Q107
MUTE
J102
LINE OUT
DIN SW
DIN OUT
Q903
REC MUTE DRIVE
OSC.1
BIAS
Q910
BIAS OSC SW
S801
REC MUTE
TP1
TP2
R/P Head
J903
PHONES
IC501 BA6124
VU METER
Vcc
G
R
D505
D501
TO REC MUTE SW
D606 D506
BATT IND
LN12177P LED Assy D501~506, 601~606
TP4L
TP5L
Q103
R/P SW

Fig. 37

Playback system

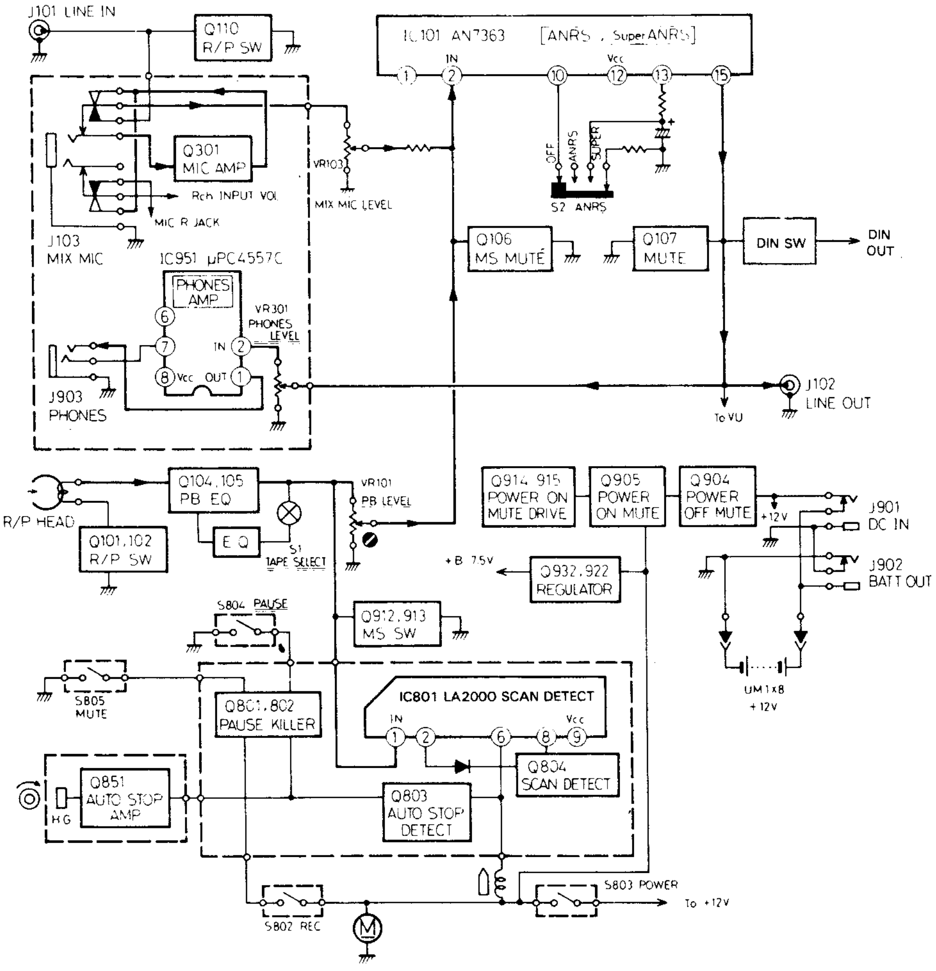
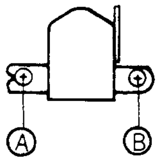
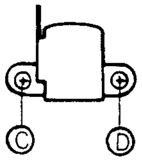
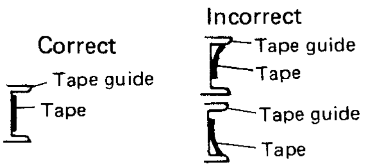

J101 LINE IN
Q110
R/P SW
IC101 AN7363
ANRS, Super ANRS
IN
Vcc
Q301
MIC AMP
VR103
Rch INPUT VOL
MIX MIC LEVEL
MIC R JACK
OFF
ANRS
SUPER
S2 ANRS
J103
MIX MIC
IC951 μPC4557C
PHONES AMP
VR301
PHONES LEVEL
IN
Vcc
OUT
Q106
MS MUTE
Q107
MUTE
DIN SW
DIN OUT
J903
PHONES
To VU
J102
LINE OUT
R/P HEAD
Q104,105
PB EQ
VR101
PB LEVEL
E Q
S1
TAPE SELECT
Q101,102
R/P SW
Q914,915
POWER ON MUTE DRIVE
Q905
POWER ON MUTE
Q904
POWER OFF MUTE
+12V
J901
DC IN
J902
BATT OUT
+B 7.5V
Q932,922
REGULATOR
S804 PAUSE
Q912,913
MS SW
UM1×8
+12V
S805
MUTE
Q801,802
PAUSE KILLER
IC801 LA2000 SCAN DETECT
IN
Vcc
Q804
SCAN DETECT
Q851
AUTO STOP AMP
HG
Q803
AUTO STOP DETECT
S803 POWER
To +12V
S802 REC
M

Fig. 38

Adjustments

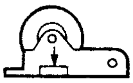
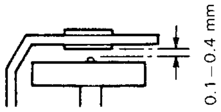
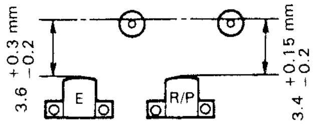
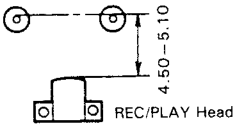
1. Adjustment Procedure of Cassette Mechanism

(Adjust the mechanism or confirm that it is in normal operating condition prior to the adjustment of the electrical circuit.)

Item	Adjustment	Adjusting point	Standard value	Remarks
Adjusting record/play-back head position 	1. Connect an electronic voltmeter to the LINE OUT terminals. 2. Play back the VTT-658 test tape. 3. Adjust the head angle with the screw Ⓐ until the reading of the electronic voltmeter becomes maximum for both channels. 4. After adjusting, set the screw with screw bond.	Screw Ⓐ	Maximum	If the head is worn, disconnected or exceedingly magnetized so as not to provide the necessary characteristics, replace it with a new one. After replacement, the head position adjustment as well as the playback level adjustment, the bias current adjustment and the recording level adjustment are all necessary. If the output difference between the left and right channels exceeds 3–4 dB, the head is defective. Replace it with a new one.
Adjusting erase head height 	Employ a special cassette (C-120) from which parts of the casing, where the erase head, record/playback head and capstan engage, has been cut away. Perform tape transport with the cassette tape. Adjust the screw Ⓒ until the tape runs in the center of the erase head tape guide.  Correct Tape guide Tape Incorrect Tape guide Tape Tape guide Tape	Screw Ⓒ		Be sure to perform this adjustment after replacing the erase head.
Adjusting motor speed	Connect a speed meter (an electronic counter) to the LINE OUT terminals. Play back the VTT-656 test tape. Adjust the semi-fixed resistor in the motor until the reading of the speed meter is 3000 Hz.	Semi-fixed resistor in the motor	3000 Hz	If the speed meter functions as a wow and flutter meter, also, connect the deck to the INPUT terminals of the meter.
Checking play-back torque	Employ a torque testing cassette tape for the checking.		40–70 gr-cm	If the standard torque is not obtained, replace the take-up disc assembly.
Checking fast forward torque	Measure the torque in the fast forward mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, perform the following. 1. Clean the capstan belt, the idler circumference, the motor pulley, the take-up reel disc circumference, the flywheel circumference, etc. 2. Replace the belt and idler.
Checking rewind torque	Measure the torque in the rewind mode in the same manner as in the above.		More than 80 gr-cm	If the standard torque is not obtained, clean the capstan belt, idler, motor pulley, flywheel circumference, rewinding idler circumference, left reel disc circumference, etc.
Checking wow and flutter	Connect a wow and flutter meter to LINE OUT terminals. Play back the VTT-656 test tape. Check to see if the reading of the meter is within 0.16% (RMS).			If the reading becomes moving value even if conforming to the standard, a re-claim may be raised. Repairs are necessary.

2. Specifications of Cassette Mechanism

Check the following items after cassette mechanism parts are replaced.

Item	Requirements	Test equipment	Test tape
1. **Source voltage**	Rated voltage: 12 V DC Motor operating voltage range: 7 – 12 V DC	Regulated power supply	——
2. **Tape speed**	4.8 cm/sec +2% (3,000 Hz) −2% Deviation 2%	Frequency counter (digital counter)	VTT-656
3. **Wow & flutter**	Less than 0.16% (RMS)	Wow meter	VTT-656
4. **Take-up torque**	PLAY 40–70 g.cm FF 80 gr-cm or more REW 80 gr-cm or more	During PLAY, the idlers, reels and flywheel should not slip against each other when the reels are locked.	——
5. **Current consumption (of motor alone)**	PLAY 170 mA or less FF 250 mA or less REW 250 mA or less	DC ammeter	C-60 (Take-up torque should be normal when tape is used.)
6. **Pinch roller pressure**	300 ~ 450 g.	Tension gauge Pull the pinch roller perpendicularly and read the gauge when the pinch roller just stops. 	
7. **Axial clearance of flywheel**		Clearance gauge	——
8. **Head position during PLAY and RECORD**	 3.6 +0.3 −0.2 mm E R/P 3.4 +0.15 −0.2 mm	During PLAY (RECORD) the dimensional requirements given here must be met, and the heads must not contact the cassette case.	Any cassette tape
9. **Head position during cueing**	 4.50 – 5.10 REC/PLAY Head		——
10. **Auto-stop operation**	The facility should operate with a reduced voltage of 8 V at the end of tape during PLAY/REC, FF, and REW.		Any cassette tape
11. **FF or REW time**	Less than 9.5 sec with C-60 cassette		

3. Adjustment Location of Cassette Amplifier

Cassette amplifier p.w. board (parts ass'y view)

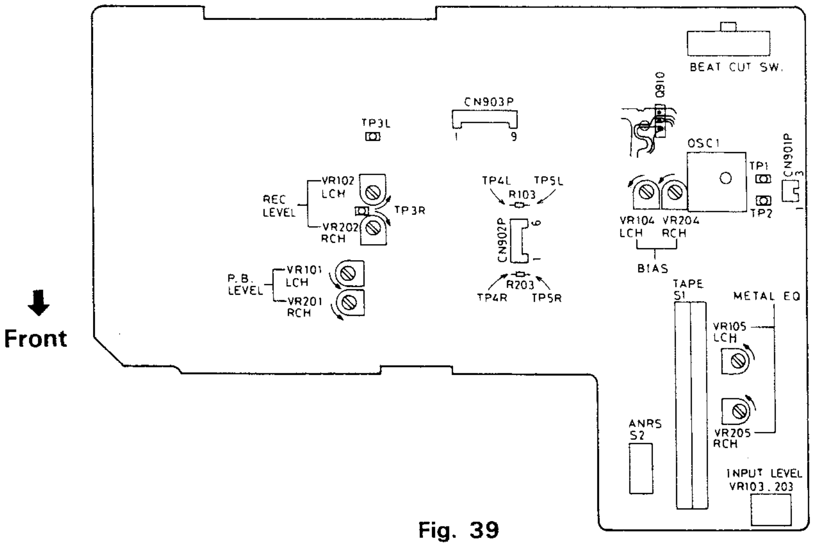
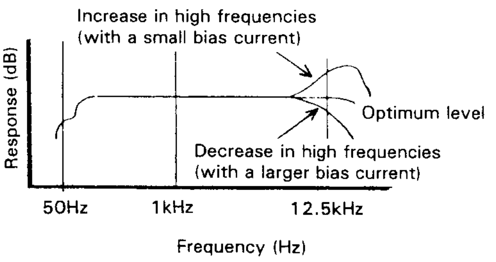

Front
BEAT CUT SW.
Q910
CN903P
1
9
TP3L
OSC1
CN901P
1
3
TP1
TP2
REC LEVEL
VR102 LCH
VR202 RCH
TP3R
TP4L
TP5L
R103
CN902P
6
1
R203
TP4R
TP5R
VR104 LCH
VR204 RCH
BIAS
P.B. LEVEL
VR101 LCH
VR201 RCH
TAPE S1
METAL EQ
VR105 LCH
VR205 RCH
ANRS S2
INPUT LEVEL VR103.203

Fig. 39

4. Adjustment Procedure of Cassette Amplifier

In the steps marked by an asterisk (*), adjustment should be performed, however, only checking is sufficient with steps other than those.

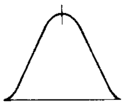
Adjustment should be performed in the order of steps 1, 2, 3, ... Perform this adjustment with the ANRS switch set to OFF.

Step	Item	Adjustment	Adjusting point	Standard value	Remarks
1*	Adjusting playback level	1. Play back the VTT-664 Reference tape (1 kHz) with the tape select switch set to the SF/NORM position. 2. Adjust VR101 and VR201 until the LINE OUT becomes about −8 dBs.	VR101 201	−8 dBs (0.3 V)	This adjustment becomes necessary when a change in playback level results (for example, due to head replacement).
2*	Level indicator sensitivity	1. Set the cassette deck to its recordding mode. 2. Apply a 1 kHz, approx. −10 dBs signal to the LINE IN terminals. 3. Adjust the recording level controls until the signal is available at −8 dBs at the LINE OUT terminals. 4. Check to see if the indicator conforms 0 VU.		0 VU	Perform the adjustment when the parts are replaced.
3	Adjusting recording level	1. Apply a 1 kHz, approx. −10 dB signal to the LINE IN terminals. Adjust the recording level controls until the signal is available at −8 dBs at the LINE OUT terminals. 2. After checking to see if the indicator become 0, record the signal applied to both left and right channels using normal tape. 3. Play back the recording part. Perform the recording signal adjustment with VR102 and VR202 so that the indicator become 0.	VR102 202	−8 dBs	The level difference between left and right channels for SF/NORMAL tape, chrome tape and metal tape should be less than 1 dB (1 VU). Perform the adjustment using a normal tape, level difference between recording and playback for SA/CrO2 and metal tapes, should be less than 1.5 dB, and that between left and right channels should also be less than 2 dB.
4	Checking record/playback frequency response	Record 1 kHz, 50 Hz and 12.5 kHz signals at an input level of 0 VU to −20 dB. Play back the tape. Check to see that the 50 Hz and 12.5 kHz signal output deviations fall within the standard range, using the 1 kHz signal output as a reference. 	For SF/NORM tape; VR104 204 For Metal tape; VR105 205	Reference frequency; 1 kHz −2±3 dB at 50 Hz 0±3 dB at 12.5 kHz	This checking should be performed for normal, chrome and metal tapes and for both right and left channels. 1. Bias current adjustment for a cassette deck should generally be performed referring to the record/playback frequency response. This is because the frequency response of a cassette deck depends more greatly upon the bias current than does that of an open reel deck. 2. If the bias current is not properly adjusted, the record and playback characteristics become as shown left.

5. Tuner Alignment

BASIC CONDITIONS

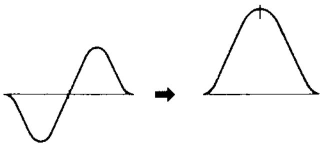
POWER SOURCE OF THE RECEIVER	DC 12 V, AC240/220/110 V, 50/60 Hz.
LOAD RESISTANCE OF THE RECEIVER	50 mW (0.55 V)/6 Ω
MODULATION OF SSG	400 Hz. 30%

Item	Description
1. AM IF ALLGNMENT	
1-1 Conditions of the receiver.	
(1) Power source:	DC 12 V (When the power is supplied directly to the tuner in the receiver, the voltage should be adjusted to the proper level which shall be required by the tuner.)
(2) Function switch position:	RADIO
(3) Band select switch:	MW
(4) Volume control:	Minimum gain position
(5) Tone control:	Center (Bass, Treble) position
(6) Variable capacitor:	Near the minimum capacity position where no signal come in.
1-2 Connection of Sweeper and the receiver	
(1) Tuner input:	Positive side to TP8
(2) Tuner output:	Positive side to TP4 Negative side to TP5
1-3 Aligning position:	CFT T3, T4
1-4 Alignment (Waveform): 	Adjust AM I.F.T. (above mentioned aligning position) so that maximum and symmetrical wave form can be obtained. In this case, the wavehead should be appeared at the center marker (455 kHz) on the scope of Sweeper.
2. FM IF ALIGNMENT	
2-1 Conditions of the receiver	
(1) Power source:	Same as mentioned in item 1-1
(2) Function switch position:	RADIO
(3) Band select switch:	FM
(4) Volume control:	Minimum gain position
(5) Tone control:	Center (Bass, Treble) position
(6) Variable capacitor:	Near the minimum capacity position where no signal come in.
2-2 Connection of Sweeper and the receiver	
(1) Tuner input:	Positive side to TP3
(2) Tuner output:	Positive side to TP7 Negative side to TP5

NOTE

a) Attach a capacitor (0.1 μF) to the positive side cable which shall be led from Sweeper input.

b) Attach a capacitor (30 pF) and a resistor (10 kΩ) in series to the positive side cable which shall be led from Sweeper output.

2-3 Aligning position:	a) IF Waveform: T1 b) Discriminate Waveform: T2 ("S" curve waveform)
2-4 Alignment (Waveform):	Adjust the discriminate coil (T2) so that "S" curve waveform may be changed to IF waveform as shown in following figure.  After above, adjust T1 so that max. sensitivity and symmetrical IF waveform can be obtained on the scope of Sweeper.
b) Discriminate Waveform:	Adjust the discriminate T2 again so that above symmetrical IF waveform may be changed to balanced "S" curve waveform.

Item	Description
3. AM RF ALIGNMENT	
3-1 Conditions of the receiver.	Same as mentioned in item 1-1.
(1) Power source:	RADIO
(2) Function switch position:	50 mW
(3) Volume control:	Center (Bass, Treble) position
(4) Tone control:	Refer the following list shown in item 3-4.
(5) Variable capacitor:	
3-2 Conditions of SSG.	
(1) Modulation:	Refer the basic condition
(2) Frequency:	Refer the following list shown in item 3-4.
(3) Output level of the attenuator in SSG:	Approx. 50 mW
3-3 Power output measuring position:	Speaker terminals
3-4 Alignment:	

Step	Frequency Band	Input Signal		Place to be aligned	Set the V. Capacitor to
		Frequency	Given to		
1	MW·(IF)	455 kHz	Loop Antenna	Input TP8 OUTPUT TP4, TP5	Minimum
2		Repeat the Step 1, and adjust for no further improvement.			
3	LW	145 kHz	Loop Antenna	L5	Maximum
4		360 kHz		TC-7	Minimum
5		Repeat the Steps 3 & 4.			
6		160 kHz	Loop Antenna	L8	160 kHz Signal
7		350 kHz		TC-6	350 kHz Signal
8		Repeat the Steps 6 & 7, and adjust for no further improvement.			
9	MW	520 kHz	Loop Antenna	L4	Maximum
10		1650 kHz		TC-4	Minimum
11		Repeat the Steps 9 & 10.			
12		620 kHz	Loop Antenna	L7	620 kHz Signal
13		1400 kHz		TC-5	1400 kHz Signal
14		Repeat the Step 12 & 13, and adjust for no further improvement.			
15	SW	5.8 MHz	Rod Antgenna through Dummy Antenna	L6	Maximum
16		18.6 MHz		TC-8	Minimum
17		Repeat the Steps 15 & 16.			
18		6.0 MHz	Rod Antenna through Dummy Antenna	L9	6.0 MHz Signal
19		18.0 MHz		TC-3	18.0 MHz Signal
20		Repeat the Steps 18 & 19, and adjust for no further improvement.			

Item	Description
4. FM RF ALIGNMENT	
4-1 Conditions of the receiver.	Same as mentioned in item 1-1.
(1) Power source:	RADIO
(2) Function switch position:	FM
(3) Band select switch:	50 mW
(4) Volume control:	Center (Bass, Treble) position
(5) Tone control:	Refer the following list shown in item 4-3.
(6) Variable capacitor:	
4-2 Condition of FM SSG.	
(1) Modulation:	Refer the basic condition
(2) Frequency:	Refer the following list shown in item 4-3.
(3) Output level of the attenuator in FM SSG:	The level shall be decided by the load resistance of the receiver mentioned in the basic conditions.
4-3 Alignment:	

	Band Select Switch Position	Sort of Antenna to be attached to SSG	Frequency of SSG	Variable Capacitor Position	Aligning Position
1	FM	Dummy Antenna	87.5 MHz	Max. capacity	L2
2			109.0 MHz	Min. capacity	TC-2
3			Ajust the above aligning position (L2 & TC-2) repeatedly so that the tuner can be received above frequency range (band width).		
4			90 MHz	to be received 90 MHz	L1
5			108 MHz	to be received 108 MHz	TC-1
6			Adjust the above aligning position (L1 & TC-1) repeatedly so that the tuner can be obtained the best sensitivity.		

FM MPX Alignment

A. 19 kHz Alignment (Regular Method)

1. Connect a frequency counter to the test point TP6 (earth = TP5).
2. Supply the monaural signal (98 MHz, 60 dB) across the test points TP1 and TP2.
3. Adjust the variable resistor VR1 so that the frequency becomes 19 kHz ± 100 Hz.

B. 19 kHz Alignment (Simplified Method)

1. Tune to an FM stereo broadcast.
2. Set the variable resistor VR2 to the minimum position of the range in where the Lch and Rch selecting.

Parts Arrangement for Alignment

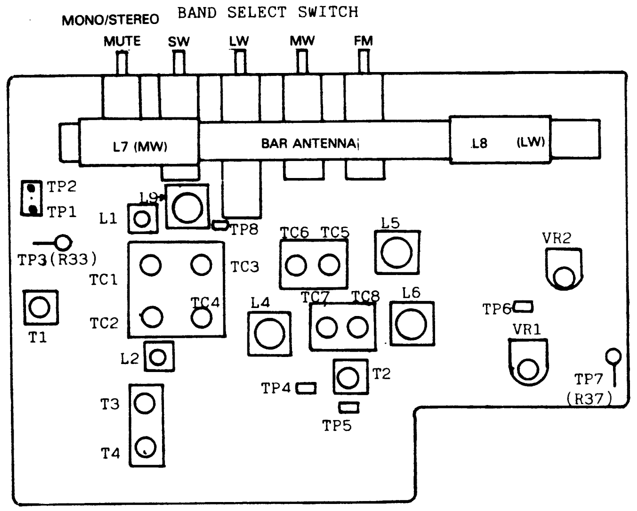
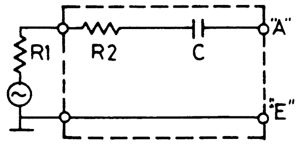


Fig. 40

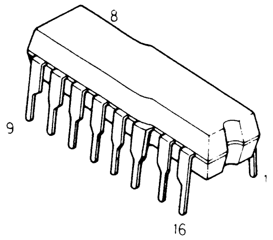
Dummy Antenna



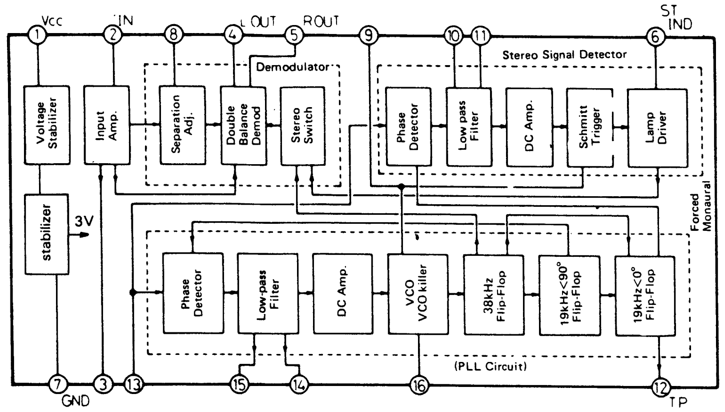
R1 + R2 = 80 Ω
C = 10 pF
R1: Output impedance of S.S.G.

Integrant Circuits

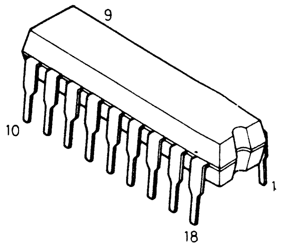
AN7410N



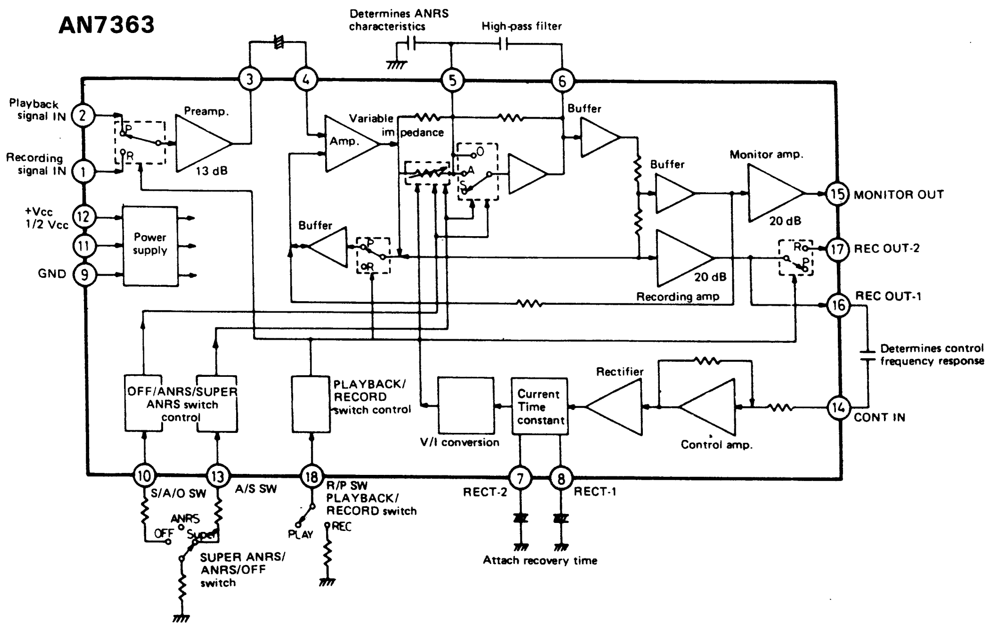
AN7410N


Vcc
IN
L OUT
R OUT
ST IND
Stereo Signal Detector
Demodulator
Voltage Stabilizer
Input Amp.
Separation Adj.
Double Balance Demod
Stereo Switch
Phase Detector
Low pass Filter
DC Amp.
Schmitt Trigger
Lamp Driver
stabilizer
3V
Forced Monaural
Phase Detector
Low-pass Filter
DC Amp.
VCO VCO killer
38kHz Flip-Flop
19kHz<90° Flip-Flop
19kHz<0° Flip-Flop
(PLL Circuit)
GND
TP

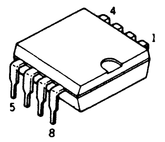
AN7363



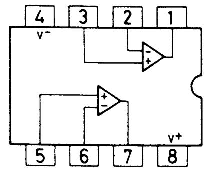
AN7363


Determines ANRS characteristics
High-pass filter
Playback signal IN
Recording signal IN
+Vcc
1/2 Vcc
GND
Preamp.
13 dB
Power supply
Variable impedance
Amp.
Buffer
Buffer
Buffer
Monitor amp.
20 dB
MONITOR OUT
REC OUT-2
REC OUT-1
20 dB
Recording amp
Determines control frequency response
CONT IN
OFF/ANRS/SUPER ANRS switch control
PLAYBACK/RECORD switch control
V/I conversion
Current Time constant
Rectifier
Control amp.
S/A/O SW
A/S SW
R/P SW PLAYBACK/RECORD switch
RECT-2
RECT-1
ANRS
OFF
Super
SUPER ANRS/ANRS/OFF switch
PLAY
REC
Attach recovery time

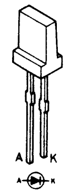
μpc4557



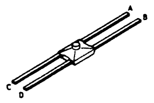
μpc4557


4
3
2
1
V⁻
V⁺
5
6
7
8

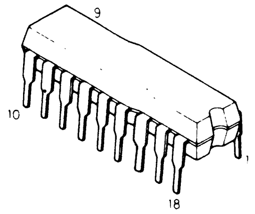
LN217RP



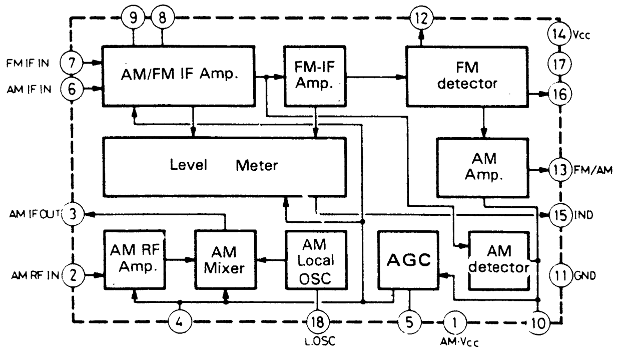
VHE-610G



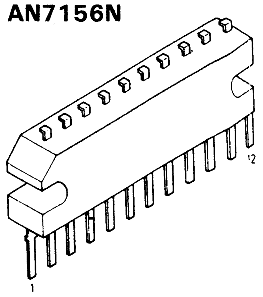
AN7222N



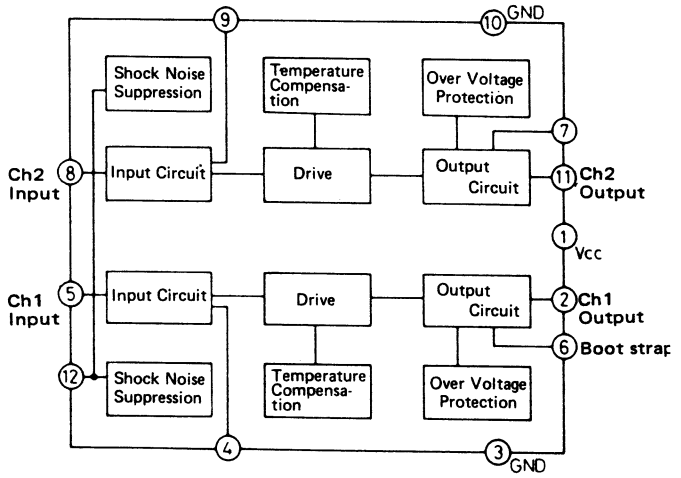
AN7222N


FM IF IN
AM IF IN
AM/FM IF Amp.
FM-IF Amp.
FM detector
Vcc
Level Meter
AM Amp.
FM/AM
AM IF OUT
IND
AM RF IN
AM RF Amp.
AM Mixer
AM Local OSC
AGC
AM detector
GND
L.OSC
AM·Vcc

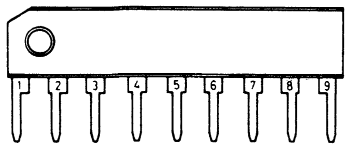
AN7156N



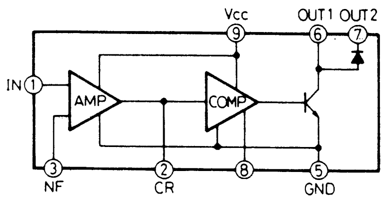
AN7156N


GND
Shock Noise Suppression
Temperature Compensation
Over Voltage Protection
Ch2 Input
Input Circuit
Drive
Output Circuit
Ch2 Output
Vcc
Ch1 Input
Input Circuit
Drive
Output Circuit
Ch1 Output
Boot strap
Shock Noise Suppression
Temperature Compensation
Over Voltage Protection
GND

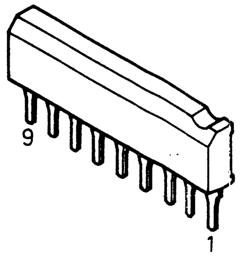
LA2000



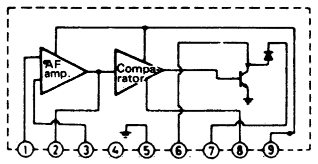
LA2000


Vcc
OUT1
OUT2
IN
AMP
COMP
NF
CR
GND

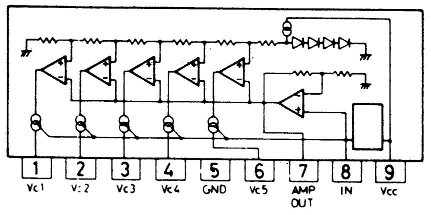
BA335
BA6124



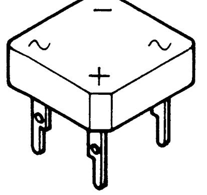
BA335


AF amp.
Comparator

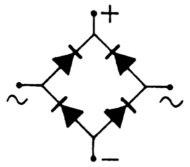
BA6124


Vc1
V:2
Vc3
Vc4
GND
Vc5
AMP OUT
IN
Vcc

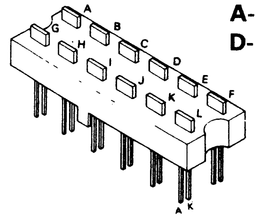
DS5BN-L



DS5BN-L



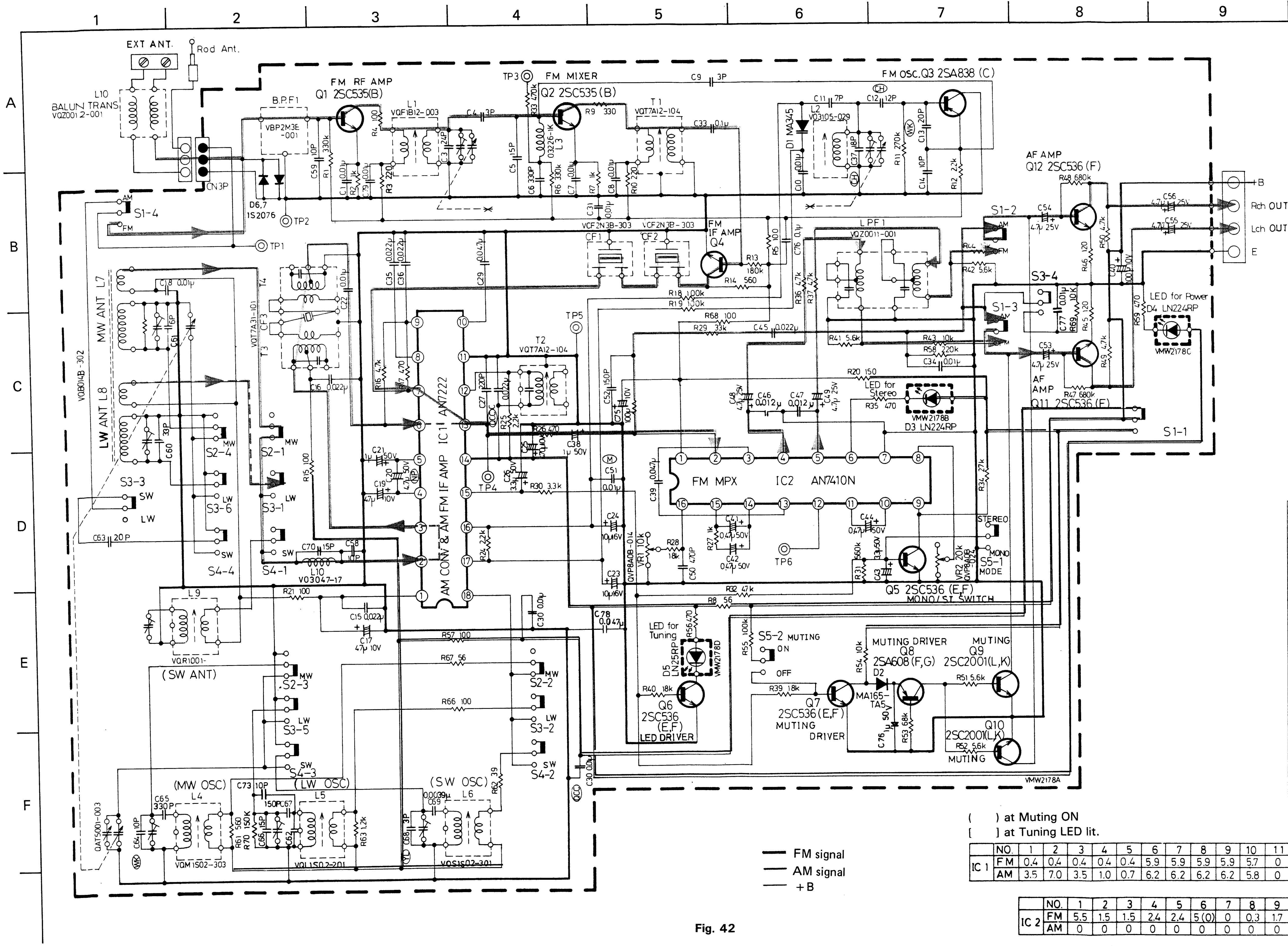
LN12177P


A
B
C
D
E
F
G
H
I
J
K
L
A K

A-C, G-I LN324GP
D-F, J-L LN224RP

Fig. 41

Standard Schematic Diagram of PC-3 (Tuner circuit)


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
EXT ANT.
Rod Ant.
L10 BALUN TRANS VQZ0012-001
B.P.F1 VBP2M3E-001
FM RF AMP Q1 2SC535(B)
L1 VQF1B12-003
TP3
FM MIXER Q2 2SC535(B)
T1 VQT7A12-104
FM OSC. Q3 2SA838 (C)
L2 VQ3105-029
D1 MA345
CN3P
D6,7 1S2076
TP2
TP1
S1-4
AM
FM
FM IF AMP Q4
CF1 VCF2N3B-303
CF2 VCF2N3B-303
LPF1 VQZ0011-001
AF AMP Q12 2SC536 (F)
S1-2
+B
Rch OUT
Lch OUT
E
S3-4
S1-3
LED for Power D4 LN224RP
VMW2178C
AF AMP Q11 2SC536 (F)
S1-1
MW ANT L7
LW ANT L8
VQB014B-302
VQT7A31-101
CF3
T3
T4
T2 VQT7A12-104
TP5
IC1 AN7222
AM CONV & AM FM IF AMP
LED for Stereo
VMW2178B
D3 LN224RP
FM MPX IC2 AN7410N
S2-4
S2-1
S3-3
SW
LW
S3-6
S3-1
S4-4
S4-1
MW
TP4
TP6
L10 VQ3047-17
STEREO
MONO
S5-1 MODE
Q5 2SC536 (E,F) MONO/ST SWITCH
L9 VQR1001-
(SW ANT)
S2-3
S3-5
S4-3
S2-2
S3-2
S4-2
LED for Tuning
D5 LN25RP
VMW2178D
Q6 2SC536 (E,F) LED DRIVER
S5-2 MUTING
ON
OFF
Q7 2SC536(E,F) MUTING DRIVER
MUTING DRIVER Q8 2SA608 (F,G)
MUTING Q9 2SC2001(L,K)
D2 MA165-TA5
Q10 2SC2001(L,K) MUTING
VMW2178A
(MW OSC) L4 VQM1S02-303
(LW OSC) L5 VQL1S02-201
(SW OSC) L6 VQS1S02-301
QAT5001-003
FM signal
AM signal
+B

Q	Band	Emitter	Collector	Base
Q 1 FM.RF	FM	1.3	4.5	2.0
	AM	0	0	0
Q 2 FM.MIX	FM	0.8	4.7	1.4
	AM	0	0	0
Q 3 FM.OSC	FM	3.0	0	2.3
	AM	0	0	0
Q 4 FM.IF	FM	0	4.8	0.6
	AM	0	0	0
Q 5 M/S	FM	0	1.8	0
	AM	0	0	0
Q 6 A.AMP	FM	0.1	3.2	0.8
	AM	0.1	3.2	0.8
Q 7 A.AMP	FM	0.1	3.2	0.8
	AM	0.1	3.2	0.8
Q 8 M.DRIVE	FM	0 (0)	0 (2.5)	0.6 (0.2)
	AM	0	0	0
Q 9 M.DRIVE	FM	0 (2.0)	0 (2.0)	0 (1.4)
	AM	0	0	0
Q10 MUTE	FM	0	0	0 (0.7)
	AM	0	0	0
Q11 MUTE	FM	0	0	0 (0.7)
	AM	0	0	0
Q12 L.DRIVE	FM	0 [0]	4.0 [0]	0 [0.7]
	AM	0 [0]	4.0 [0]	0 [0.2]

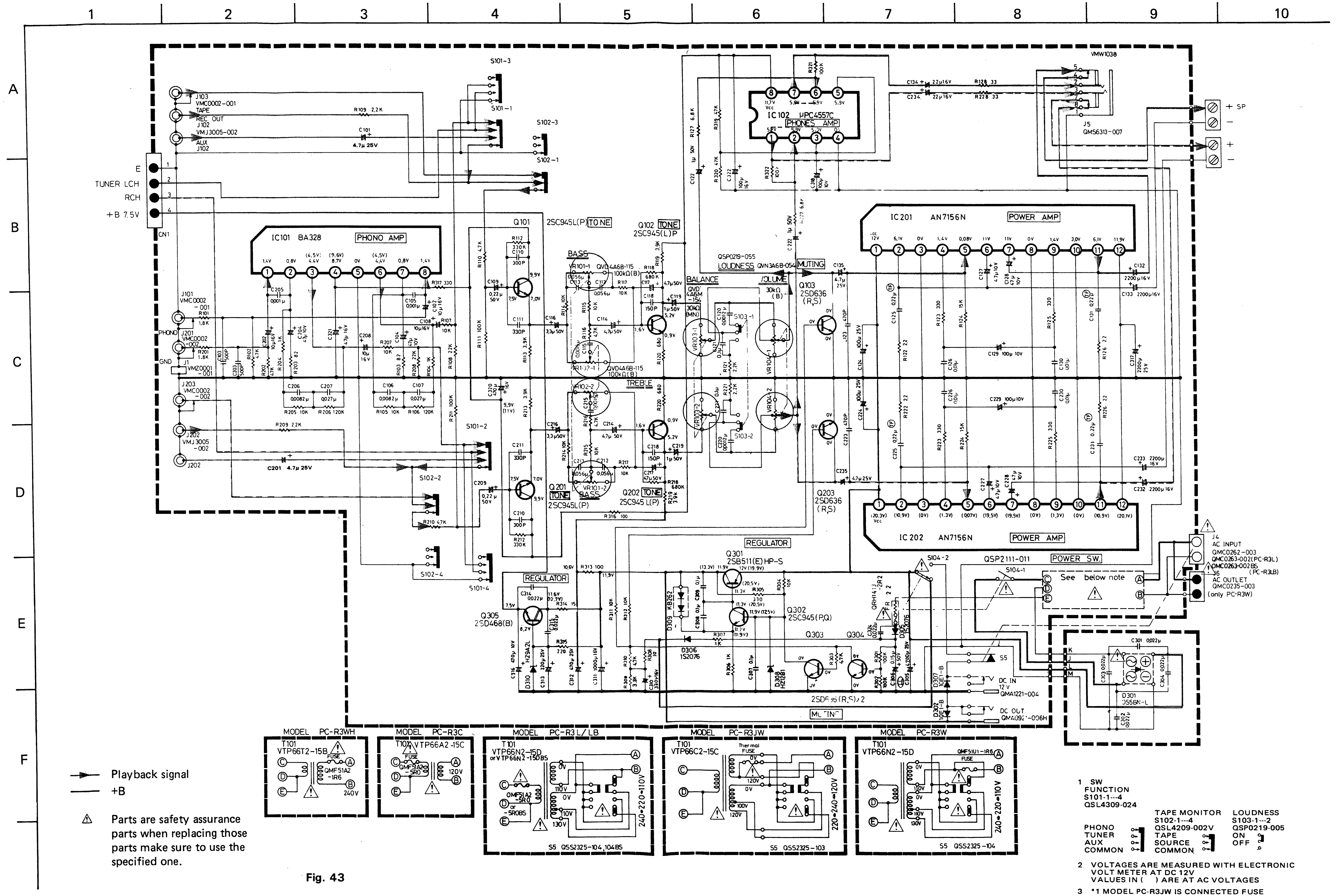
( ) at Muting ON
[ ] at Tuning LED lit.

	NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
IC 1	FM	0.4	0.4	0.4	0.4	0.4	5.9	5.9	5.9	5.9	5.7	0	6.4	1.4	6.4	0.1	1.4	1.4	0
	AM	3.5	7.0	3.5	1.0	0.7	6.2	6.2	6.2	6.2	5.8	0	6.8	0.9	6.9	0	0.1	0.1	6.9

	NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
IC 2	FM	5.5	1.5	1.5	2.4	2.4	5(0)	0	0.3	1.7	1.3	1.3	0.1	1.3	1.3	1.3	0.4
	AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Fig. 42

Standard Schematic Diagram of PC-3 (Amplifier circuit)


1
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7
8
9
10
A
B
C
D
E
F
J103
VMC0002-001
TAPE
REC OUT
J102
VMJ3005-002
AUX
J102
E
TUNER LCH
RCH
+B 7.5V
CN1
S101-3
S101-1
S102-3
S102-1
R109 2.2K
C101 4.7μ 25V
IC101 BA328
PHONO AMP
Q101
2SC945L(P) TONE
Q102 TONE
2SC945(L)P
BASS
VR101-1
QVD4A6B-115 100kΩ(B)
TREBLE
VR102-2
QVD4A6B-115 100kΩ(B)
QSP0219-055
LOUDNESS
QVN3A6B-054
MUTING
BALANCE
QVD4A6M-15A
30kΩ (MN)
VOLUME
30kΩ (B)
S103-1
S103-2
Q103
2SD636 (R,S)
IC102 μPC4557C
PHONES AMP
VMW1038
J5
QMS6313-007
+ SP
−
+
−
IC201 AN7156N
POWER AMP
IC202 AN7156N
POWER AMP
Q203
2SD636 (R,S)
Q201 TONE
2SC945L(P)
Q202 TONE
2SC945 L(P)
J101
VMC0002-001
PHONO
J201
VMC0002-002
GND
J1
VMZ0001-001
J203
VMC0002-002
J202
VMJ3005-002
J202
C201 4.7μ 25V
R209 2.2K
S101-2
S102-2
S102-4
S101-4
REGULATOR
Q305
2SD468(B)
REGULATOR
Q301
2SB511(E) HP-S
Q302
2SC945(P,Q)
Q303
Q304
D306
1S2076
D308
HZ12B1
D309 KB262
D310 HZ9A2L
2SD635(R,S)×2
MUTING
S104-2
QSP2111-011
POWER SW
S104-1
See below note
S5
DC IN 12V
QMA1221-004
DC OUT
QMA092-006H
J4
AC INPUT
QMC0262-003
QMC0263-002(PC-R3L)
QMC0263-002BS (PC-R3LB)
J6
AC OUTLET
QMC0235-003
(only PC-R3W)
C301 0.022μ
D301
DS5BN-L
MODEL PC-R3WH
T101
VTP66T2-15B
FUSE
QMF51A2 -1R6
240V
MODEL PC-R3C
T101 VTP66A2-15C
FUSE
QMF51A2 -5R0
120V
MODEL PC-R3L/LB
T101
VTP66N2-15D
or VTP66N2-15DBS
OMF51A2 -5R0 or -5R0BS
110V
130V
240•220•110V
S5 QSS2325-104, 104BS
MODEL PC-R3JW
T101
VTP66C2-15C
Thermal FUSE
120V
100V
220•240•120V
S5 QSS2325-103
MODEL PC-R3W
T101
VTP66N2-15D
QMF51U1-1R6
FUSE
110V
130V
240•220•110V
S5 QSS2325-104

—▶— Playback signal

——— +B

⚠ Parts are safety assurance parts when replacing those parts make sure to use the specified one.

Fig. 43

1 SW

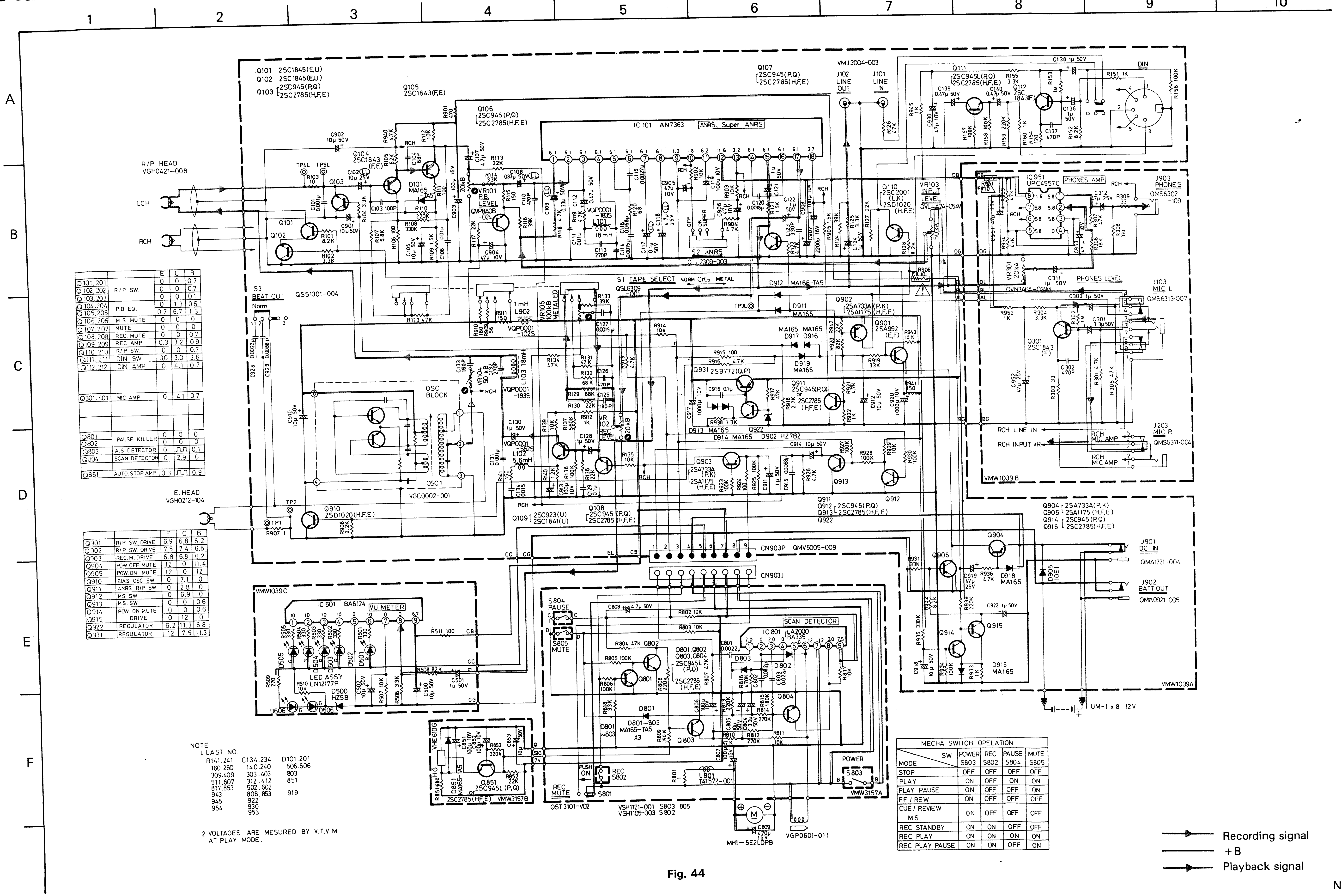
FUNCTION
S101-1---4
QSL4309-024

FUNCTION	TAPE MONITOR	LOUDNESS
S101-1---4	S102-1---4	S103-1---2
QSL4309-024	QSL4209-002V	QSP0219-005
PHONO	TAPE	ON
TUNER	SOURCE	OFF
AUX	COMMON	
COMMON		

2 VOLTAGES ARE MEASURED WITH ELECTRONIC VOLT METER AT DC 12V
VALUES IN ( ) ARE AT AC VOLTAGES

3 *1 MODEL PC-R3JW IS CONNECTED FUSE QMF51U1-5R0, OTHERS ARE CONNECTED STRAIGHT.

Standard Schematic Diagram of PC-3 (Cassette deck circuit)


1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
R/P HEAD
VGH0421-008
LCH
RCH
E. HEAD
VGH0212-104
Q101 2SC1845(E,U)
Q102 2SC1845(E,U)
Q103 2SC945(P,Q) 2SC2785(H,F,E)
Q105 2SC1843(F,E)
Q106 2SC945(P,Q) 2SC2785(H,F,E)
Q104 2SC1843 (F,E)
IC 101 AN7363
ANRS, Super ANRS
Q107 2SC945(P,Q) 2SC2785(H,F,E)
VMJ3004-003
J102 LINE OUT
J101 LINE IN
Q111 2SC945L(P,Q) 2SC2785(H,F,E)
Q112 2SC1843(F)
DIN
VR101 P.B. LEVEL QVP8A0B-024
VR103 INPUT LEVEL
Q110 2SC2001 (L,K) 2SD1020 (H,F,E)
IC 951 UPC4557C
PHONES AMP
J903 PHONES QMS6302-109
VR301 20KA
PHONES LEVEL
QVN3A6A-02KM
J103 MIC L QMS6313-007
Q301 2SC1843 (F)
J203 MIC R QMS6311-004
RCH LINE IN
RCH INPUT VR
RCH MIC AMP
VMW1039 B
S1 TAPE SELECT NORM CrO2 METAL
QSL6309-001
S2 ANRS
Q2309-003
S3 BEAT CUT
QSS1301-004
D912 MA165-TA5
D911 MA165
Q902 2SA733A(P,K) 2SA1175(H,F,E)
Q901 2SA992 (E,F)
MA165 MA165 D917 D916
D919 MA165
Q931 2SB772(Q,P)
Q911 2SC945(P,Q) or 2SC2785 (H,F,E)
D913 MA165
Q922
D914 MA165
D902 HZ7B2
Q903 2SA733A (P,K) 2SA1175 (H,F,E)
Q913
Q912
OSC BLOCK
OSC 1
VGC0002-001
VR102 REC LEVEL
L102 5.6mH
L103 18mH
L101 18mH
L902
VR105 100KB METAL EQ
Q910 2SD1020(H,F,E)
TP1
TP2
TP4L
TP5L
TP3L
Q109 2SC923(U) 2SC1841(U)
Q108 2SC945 (P,Q) 2SC2785 (H,F,E)
Q911 Q912 2SC945(P,Q) Q913 2SC2785(H,F,E) Q922
Q904 2SA733A(P,K)
Q905 2SA1175 (H,F,E)
Q914 2SC945 (P,Q)
Q915 2SC2785(H,F,E)
CN903P QMV5005-009
CN903J
J901 DC IN QMA1221-004
J902 BATT OUT QMA0921-005
D905 10E1
D918 MA165
D915 MA165
VMW1039A
UM-1 x 8 12V
VMW1039C
IC 501 BA6124
VU METER
LED ASSY LN12177P
D500 HZ5B
D505
D504
D503
D502
D501
D606
D506
S804 PAUSE
S805 MUTE
IC 801 LA2000 BA335
SCAN DETECTOR
Q801.Q802 Q803.Q804 2SC945L (P,Q) 2SC2785 (H,F,E)
D801
D801~803 MA165-TA5 X3
D803
D802
Q803
Q804
REC S802
REC MUTE
S801
PUSH ON
GST3101-V02
VSH1121-001 S803 805
VSH1105-003 S802
L801 T41572-001
POWER
S803
VMW3157A
M
MH1-5E2LDPB
C809 470μ 16V
VGP0601-011
VHE6106
D851 MA165-TA5
Q851 2SC945L (P,Q) or 2SC2785(H,F,E)
VMW3157B

		E	C	B
Q101, 201	R/P SW.	0	0	0.7
Q102, 202		0	0	0.7
Q103. 203		0	0	0.1
Q104. 204	P.B. EQ.	0	1.3	0.6
Q105. 205		0.7	6.7	1.3
Q106, 206	M.S. MUTE	0	0	0
Q107. 207	MUTE	0	0	0
Q108. 208	REC. MUTE	0	0	0.7
Q109. 209	REC. AMP	0.3	3.2	0.9
Q110. 210	R/P SW.	0	0	0.7
Q111, 211	DIN SW	3.0	3.0	3.6
Q112, 212	DIN AMP	0	4.1	0.7
Q301, 401	MIC AMP	0	4.1	0.7
Q801	PAUSE KILLER	0	0	0
Q802		0	0	0
Q803	A.S. DETECTOR	0	⎍⎍	0.1
Q804	SCAN DETECTOR	0	2.9	0
Q851	AUTO. STOP AMP	0.3	⎍⎍	0.9

		E	C	B
Q901	R/P SW. DRIVE	6.9	6.8	6.2
Q902	R/P SW. DRIVE	7.5	7.4	6.8
Q903	REC. M. DRIVE	6.8	6.8	6.2
Q904	POW. OFF MUTE	12	0	11.4
Q905	POW. ON MUTE	12	0	12
Q910	BIAS OSC SW.	0	7.1	0
Q911	ANRS R/P SW	0	2.8	0
Q912	MS. SW	0	6.9	0
Q913	MS. SW	0	0	0.6
Q914	POW ON MUTE DRIVE	0	0	0.6
Q915		0	12	0
Q922	REGULATOR	6.2	11.3	6.8
Q931	REGULATOR	12	7.5	11.3

NOTE
1. LAST NO.

R141.241	C134.234	D101.201
160.260	140.240	506.606
309.409	303.403	803
511.607	312.412	851
817.853	502.602	
943	808.853	919
945	922	
954	930	
	953	

2. VOLTAGES ARE MESURED BY V.T.V.M. AT. PLAY MODE.

MECHA SWITCH OPELATION

MODE \ SW	POWER S803	REC S802	PAUSE S804	MUTE S805
STOP	OFF	OFF	OFF	OFF
PLAY	ON	OFF	ON	ON
PLAY PAUSE	ON	OFF	OFF	ON
FF / REW.	ON	OFF	OFF	OFF
CUE / REVIEW M.S.	ON	OFF	OFF	OFF
REC STANDBY	ON	ON	OFF	OFF
REC PLAY	ON	ON	ON	ON
REC PLAY PAUSE	ON	ON	OFF	ON

Recording signal
+B
Playback signal

Fig. 44

Wiring Connection (1) (Receiver circuit)

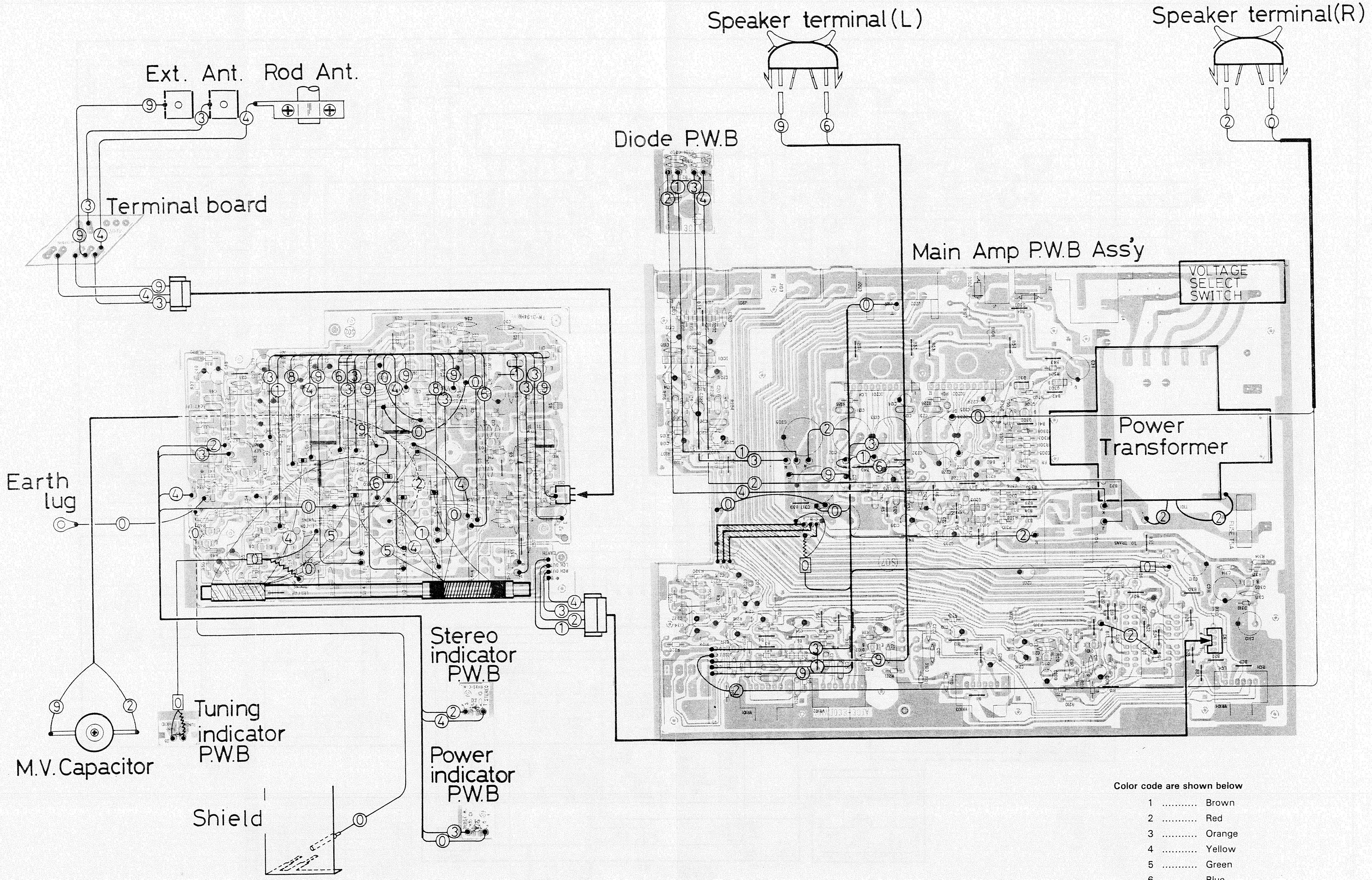
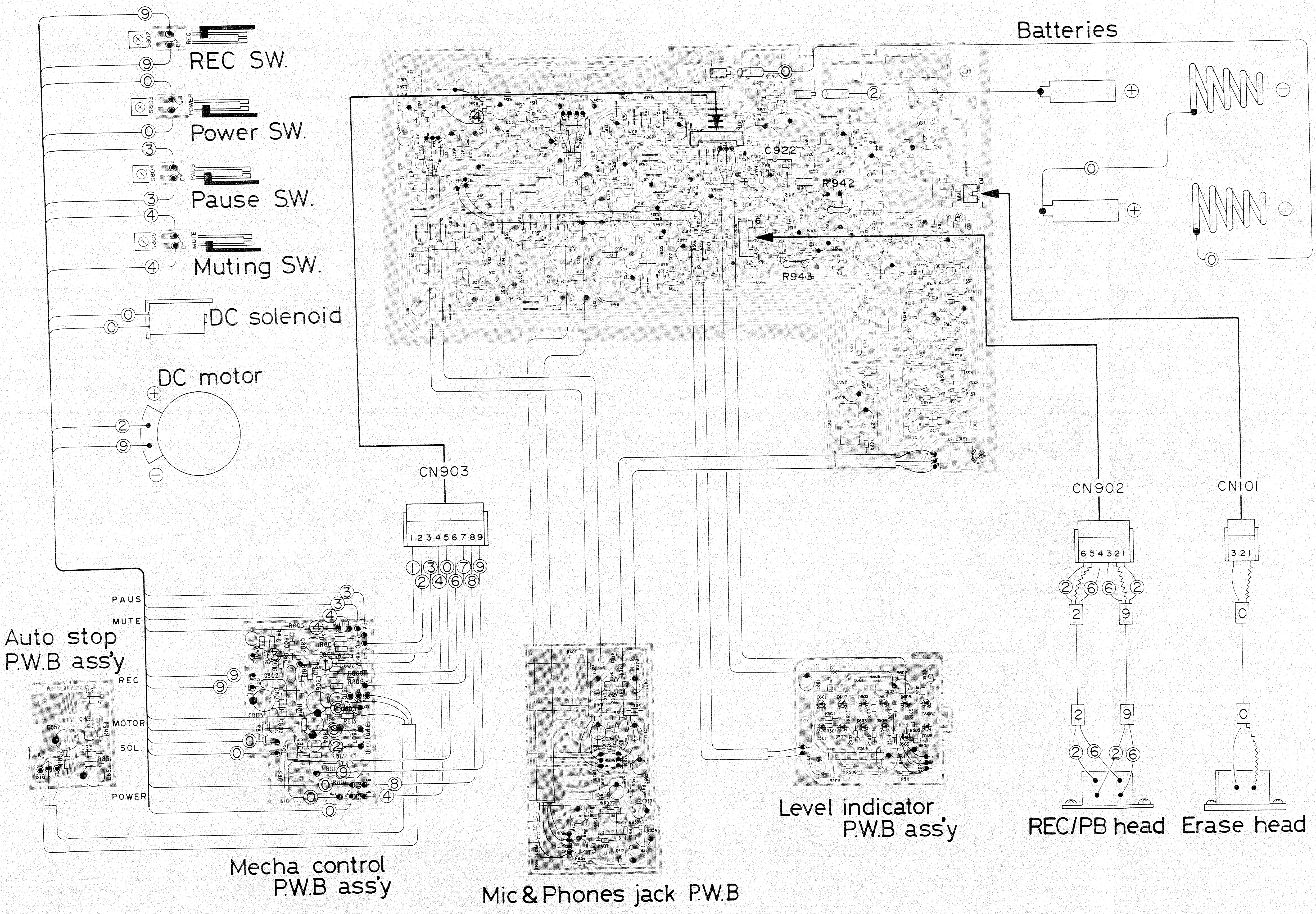

Ext. Ant.
Rod Ant.
Terminal board
Earth lug
M.V. Capacitor
Tuning indicator P.W.B
Shield
Stereo indicator P.W.B
Power indicator P.W.B
Speaker terminal(L)
Speaker terminal(R)
Diode P.W.B
Main Amp P.W.B Ass'y
VOLTAGE SELECT SWITCH
Power Transformer

Fig. 45

Color code are shown below

1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Grey
9	White
0	Black

Wiring Connection (2) (Stereo Cassette deck circuit)


REC SW.
S802
Power SW.
S803
Pause SW.
S804
Muting SW.
S805
DC solenoid
DC motor
Batteries
C922
R942
R943
CN903
1 2 3 4 5 6 7 8 9
CN902
6 5 4 3 2 1
CN101
3 2 1
PAUS
MUTE
REC
MOTOR
SOL.
POWER
Auto stop
P.W.B ass'y
Mecha control
P.W.B ass'y
Mic & Phones jack P.W.B
Level indicator
P.W.B ass'y
REC/PB head
Erase head

Color code are shown below

1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Violet
8	Grey
9	White
0	Black

Fig. 46

Speaker Component Parts (PC-B3)

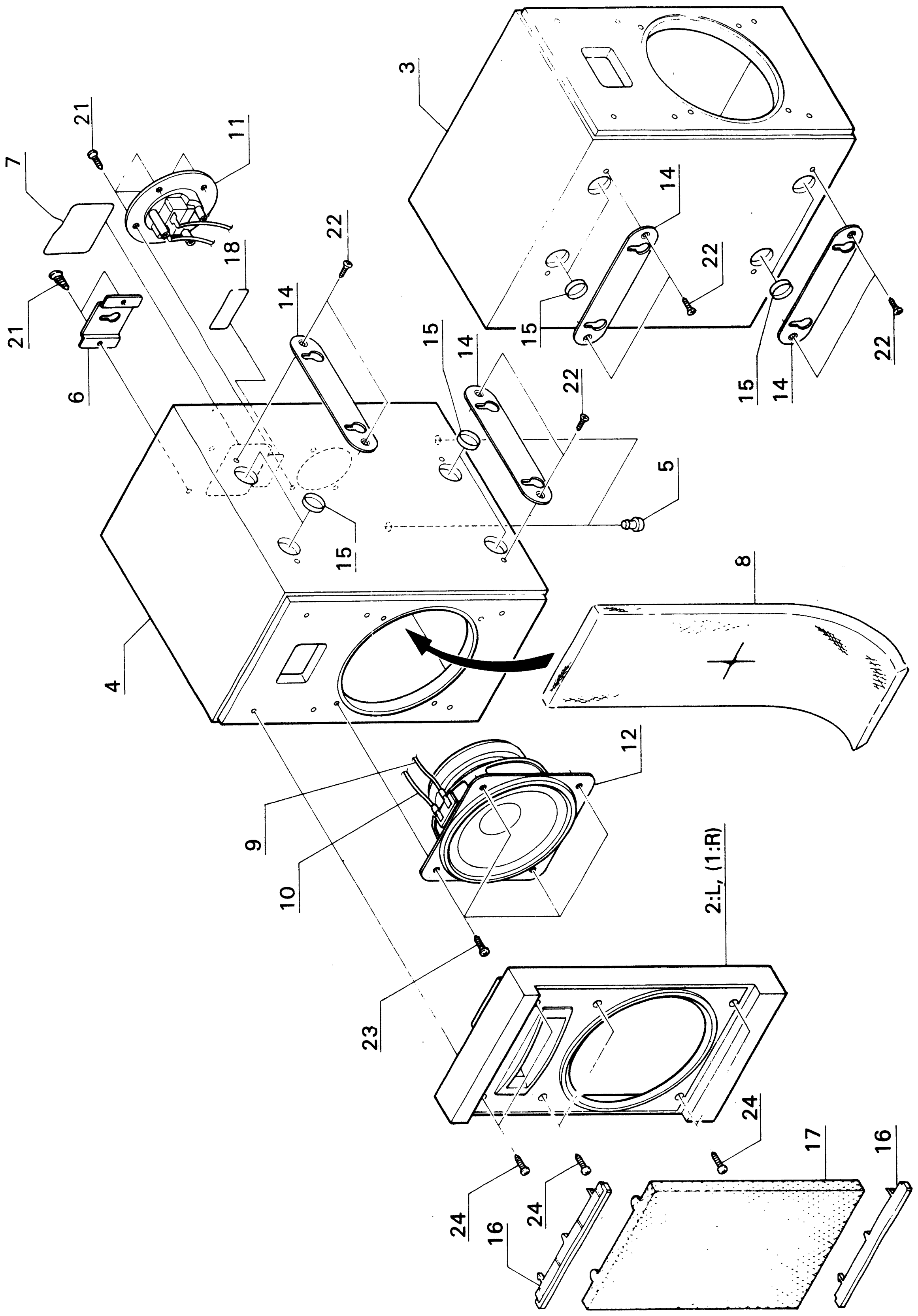


Fig. 47

PC-B3 Speaker Component Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
1		VJC2063-005	Front Panel	Right	1
2		〃 -006	〃	Left	1
3		VJC2064-003	Speaker Case	Right	1
4		〃 -004	〃	Left	
5		VJF4009-001	Foot		2
6		VKL4878-003	Bracket		1
7		VYNA304-002	Name Plate		1
8		VKZ4145-001	Sound Absober		1
9		VWE222-28A4ZR	Wire with Receptacle		1
10		VWE220-28A4ZR	〃		1
11		VMZ0017-001	Speaker Terminal		1
12		EAS10P195SA	Speaker		1
13		VKZ4178-001	Sound Absober		1
14		VYH4891-004	Plate		2
15		VYH4934-001	Spacer		4
16		VJD4549-001	Fitting		2
17		VJD3322-003	Punching Panel		1
18		VNC5003-206	Serial Label		1
21		SDSA3012R	Screw	Bracket SPK Terminal x 4	6
22		SSSA3012R	〃	Plate	4
23		SDSA3012Z	〃	Sound Absober	4
24		SDSA3016M	〃	Plate	6

Speaker Packing

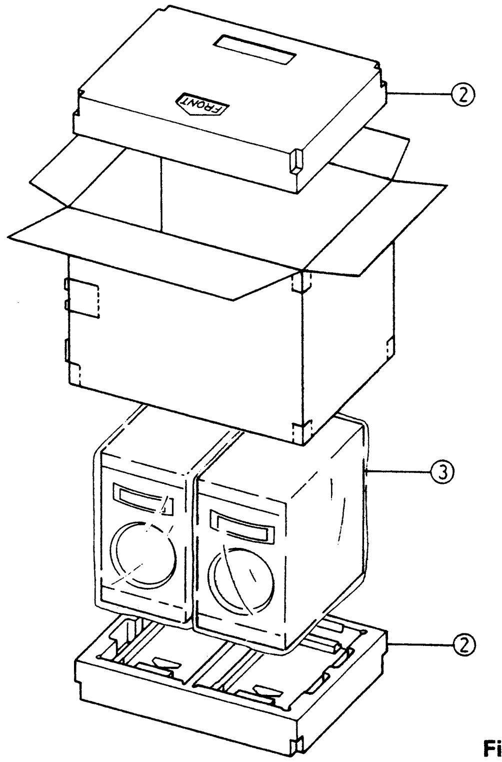


Fig. 48

Speakers Packing Material Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
1 ~ 3		VDP7006-002BA	Carton Ass'y		1 set
1		VPA2006-005	Sleeve		1
2		VPH1221-001	Cushion		2
3		QPGA040-05005	Poly Bag		2

PC-R3
Enclosure Assembly and Electrical Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
(1,3～5)		ZCPCR3Y-CBF	Front Cover Ass'y		1
1		VJC1203-004	Front Cover		1
2		VJD4535-002	Panel		1
3		VJK4156-002	Lens		1
4		VJD4574-001	Spacer		1
5		VJD4574-002	Spacer		1
6		VYH1126-002	Chassis		1
7		VYH4837-00B	Roller Bracket Ass'y (A)		1
8		VYH4838-00B	Roller Bracket Ass'y (B)		1
9		VYH4839-00B	Roller Bracket Ass'y (C)		1
10		VYH4840-00B	Roller Bracket Ass'y (D)		1
11		VYH4777-00B	Tuning Flywheel Ass'y		1
12		—	Tuner P.W. Board		1
13		LN224RP	LED	Stereo Indicator	1
14		VYH4967-001	LED Holder		2
15		LN224RP	LED	Power Indicator	1
16		VYH3202-001	Drum		1
17		VYH4853-001	Bar Ant. Holder		1
18		VXP4178-001	Push Knob		5
19		VHR2TK9-05AT	Dial Rope	Kevlar	1 set
20		50153-3	Spring		1
21		VXL4144-001	Knob		1
22		VJN4067-00A	Needle Ass'y		1
23		—	P.W. Board Ass'y	Tuning Indicator	1
24		VQZ0012-001	BALUN TRANS		1
25		—	Amp. P.W. Board		1
26		VWS603-10B4B4	Heikou Wire		1
27		QHX2075-001	Wire Clamp		3
28	⚠	QMF51A2-5R0	Fuse	PC-R3L	1
		〃	〃	PC-R3LB	1
29		VYH4942-002	Shield Plate		1
30	⚠	VTP66N2-15DBS	Power Transformer	T101 PC-R3LB	1
	⚠	VTP66N2-15D	〃	T101 PC-R3L	1
32		VYH4854-001	Remote Bar		1
33		VYTS404-001	Lock Plate		1
34		VYH3206-001	Bracket (A)		1
35		VYH4975-001	Holder		1
36		VYH4930-001	Shield Plate		1
37		VYH4857-003	Heat Sink		1
38		VYH4858-001	Bracket (C)		1
39		VYH4638-001	Bracket		3
40		VYH4924-001	Spacer		1
41		VYH4860-001	Trans Bracket		2
43		VYSA1R2-011	Spacer		1
44		VXQ4050-001	Lever Cap		2
45		VXP4179-001	Push Knob		1
46		VXP4198-001	Power Knob		1
47		VKL2145-001	Bottom Cover		1
48		VJF4007-002	Foot		4
49		VJC1204-004	Top Cover		1
50		VMZ0018-001	SPK Terminal		2
51		VYH4923-001	Plate		3
52		VJD4562-002	Plate		1
53		VJA3003-00A	Rod Ant. Ass'y		1
54		VYH4861-001	Ant. Holder		1
55		VYH4862-002	Bracket		1
56		VJD4508-002	Ant. Cover		1
57		VJD4546-002	Ant. Catcher		1
58		V44814-00B	Ext. Ant. Terminal		2
59		VXL4164-001	Tuning Knob		1

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
60		VXL4165-001	Volume Knob		1
61		VXL4166-001	Knob		3
65		—	Diode P.W.B. Ass'y		1
68		VYSP104-003	Spacer		1
69		VYH4926-002	Insulator		1
70		VYH4925-001	Shield Plate	Bottom cover	1
71		VYH4946-00A	Shield Ass'y	Tuner P.W.B.	1
72		VYNA303-006	Name Plate	PC-R3L	1
		〃 -007	〃	PC-R3LB	1
74		VYSA1R4-056	Spacer	Top cover	2
75		51739-2	Tab		1
81		Q03093-837	Washer	Tuning Flywheel Ass'y	1
82		WLS3000Z	Lock Washer	Heat Sink	1
83		WNB3000N	Washer	〃	1
84		REE5000	E. Ring	Tuning Flywheel Ass'y	1
86		LPSP3006Z	Screw	Chassis x 2 Bracket (A) x 2	4
87		LPSP4008Z	〃	Trans. Bracket	4
88		SBSB3006Z	Tap. Screw	Bracket (C) x 1 Bottom Cover Ass'y x 1 Ant. Cover x 1	3
89		SBSB3008C	〃	Bottom Cover Ass'y	5
90		SBSF3008Z	〃	Front Cover x 2, Holder x 1	3
91		SBSF3010Z	〃	Roller BKT Ass'y x 4 Bar Ant. Holder x 2 LED x 2 P.W.B. ~ Chassis x 2 Bracket (A) x 1 Heat Sink x 3, Bracket (C) x 1	15
92		SBSF3012Z	〃	IC	4
93		SBSF3014Z	Screw	Heat Sink	1
94		SDSB3008R	Tap. Screw	Ant. Cover	1
95		SDSP3006R	Screw	Bracket	1
96		SHSP3006R	〃	Bottom ~ F. Cover x 7 Bottom ~ T. Cover x 9	16
97		SPSP3006Z	〃	Heat Sink	1
98		SPSP4004Z	〃	Bottom Cover ~ Trans. Bracket	4
99		SSSP2004Z	〃	Knob	1
100		SSSP3006Z	〃	Bracket x 3 Bottom Cover Ass'y x 3	6
101		SSSP2608Z	〃	Drum	1

PC-R3 Enclosure Assembly and Electrical Parts

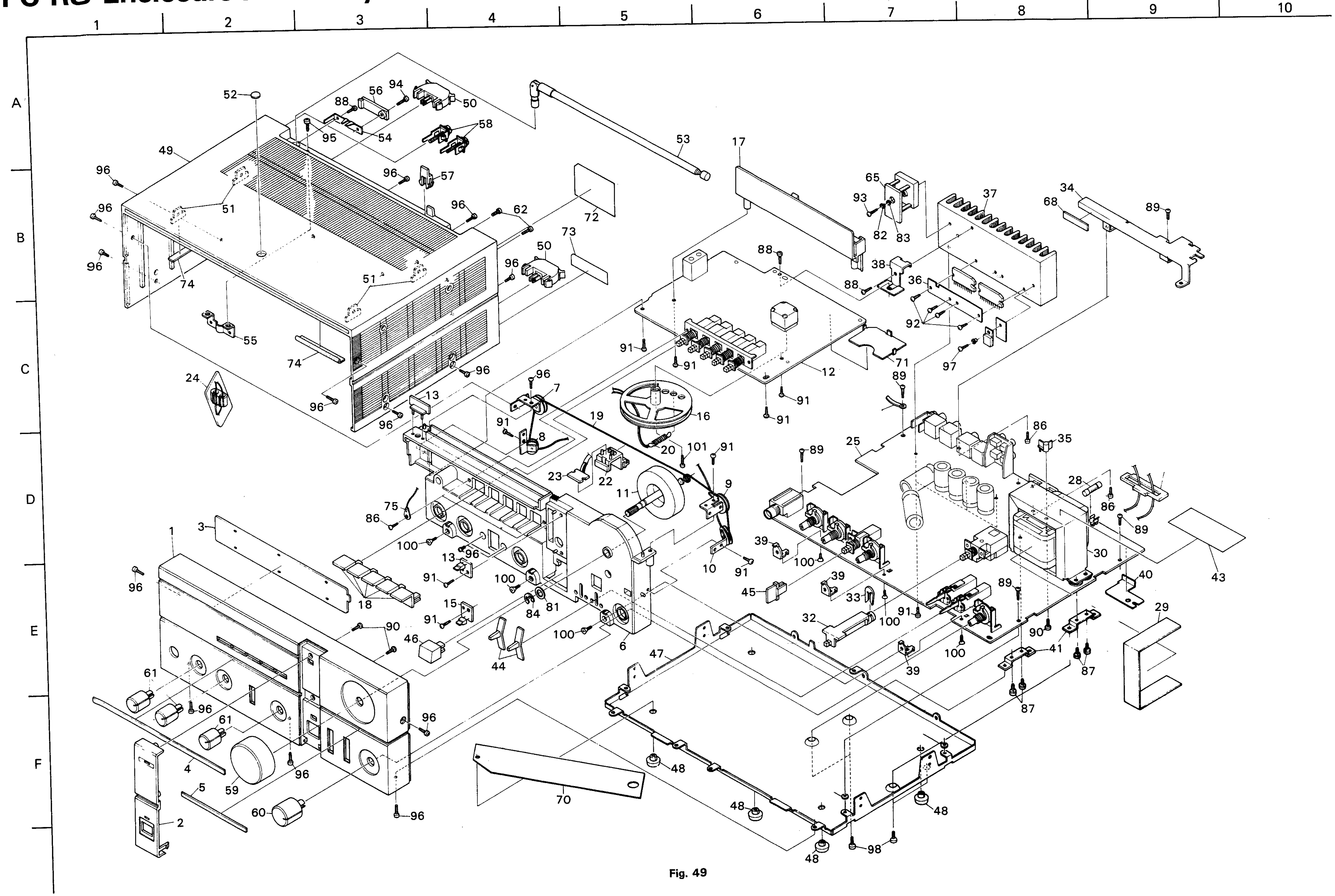

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Fig. 49

PC-D3 Enclosure Assembly and Electrical Parts

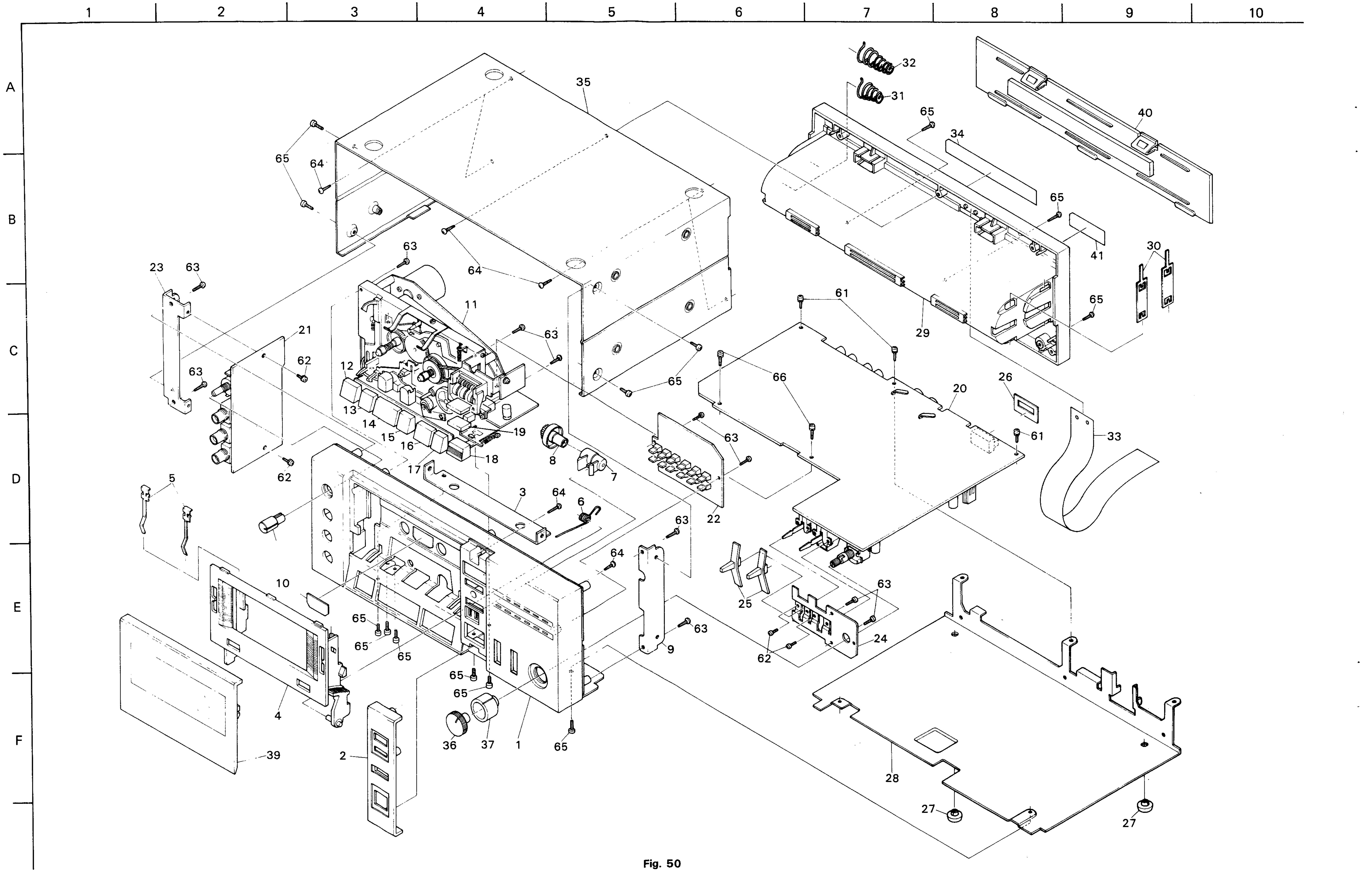
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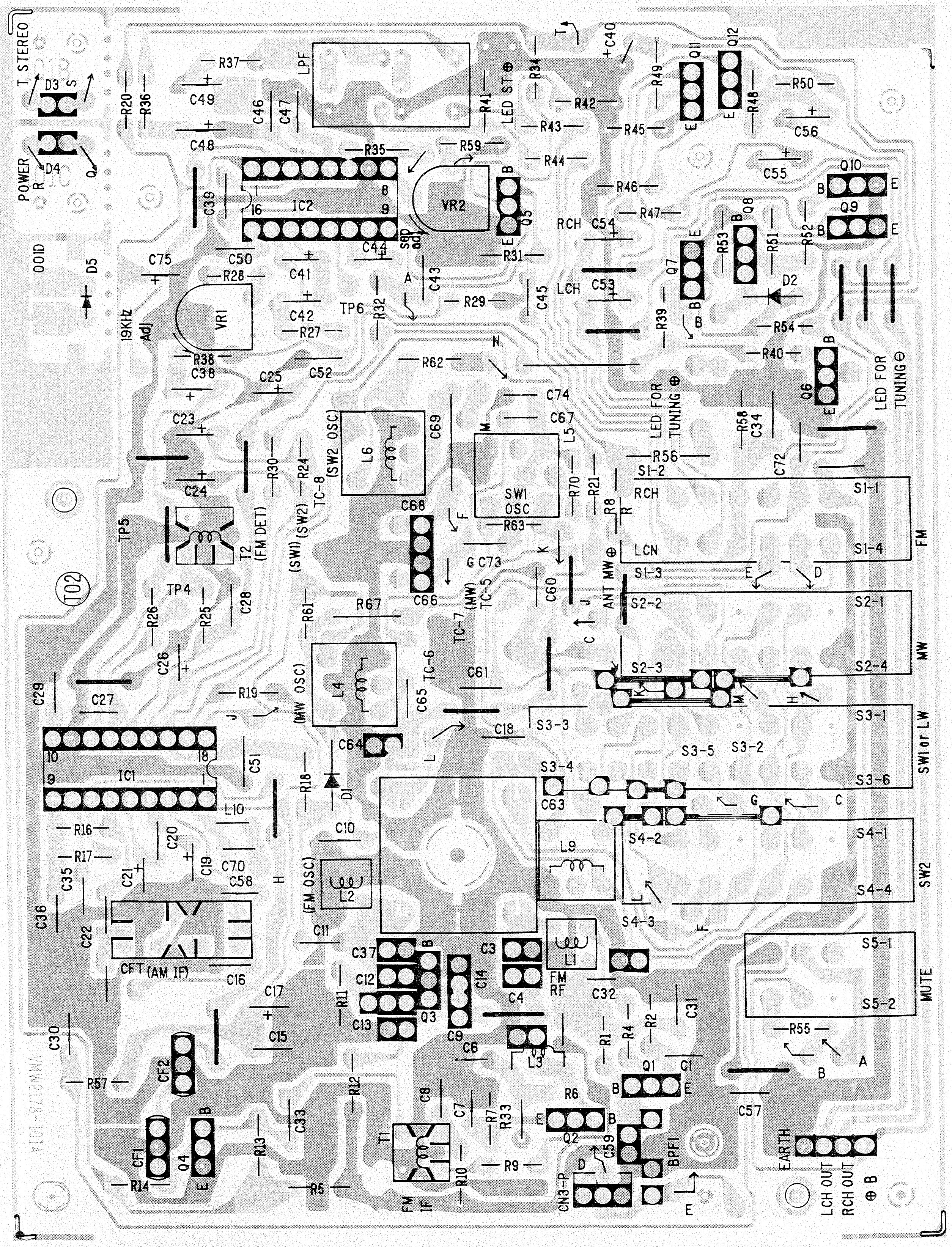
Fig. 50

PC-D3
Enclosure Assembly and Electrical Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
1		VJC1205-004	Front Cover		1
2		VJD4539-002	Panel		1
3		VYH4865-001	Door Bracket		1
4		VJT2066-002	Cassette Door		1
5		VKY4180-001	Cassette Spring		1
6		VKW4319-002	Door Spring		1
7		VYH4866-001	Damper Holder		1
8		VYH4769-001	Gear		1
9		VYH4867-001	Side Bracket		1
10		VJD4005-002	Reflection Plate		1
11		—	Cassette Mecha. Ass'y		1
12		VXP4185-001	Push Button	Rec.	1
13		VXP4186-001	〃	Rew	1
14		VXP4187-001	〃	Play	1
15		VXP4188-001	〃	F.F.	1
16		VXP4189-001	〃	Stop	1
17		VXP4190-001	〃	Pause	1
18		VXP4191-001	〃	Eject	1
19		VXP4192-001	〃	Rec. Mute	1
20		—	Main P.W. Board Ass'y		1
21		—	Phones P.W. Board Ass'y		1
22		—	Level Indicator P.W. Board Ass'y		1
23		VYH4868-001	Phones Bracket		1
24		VYH4869-001	Control Bracket		1
25		VXQ4050-001	Lever Cap		2
26		VYTA475-001	Blind		1
27		VJF4007-002	Foot		2
28		VJC2061-003	Bottom Cover		1
(29,33,34) 41		ZCPCD3Y-CBR	Rear Cover Ass'y		1
29		VJC1206-003	Rear Cover		1
30		VYH4010-004	Battery Contact		2
31		53738-009	Spring		1
32		V44686-002	〃		1
33		V41583-007	Tape		1
34		VJD4490-002	Caution Plate		1
35		VJC1207-002	Top Cover		1
36		VXL4167-001	Knob	Volume	1
37		VXL4168-001	〃	〃	1
38		VXL4181-001	〃	Headphone Volume	1
39		VJT4052-00C	Cassette Door Cover Ass'y		1
40		ZCPCD3Y-RCA	Battery Cover		1
41		VYNA305-004	Name Plate	(PCD3L)	1
		VYNA305-005	〃	(PCD3LB)	1
61		LPSP3006C	Screw	Bottom Cover	3
62		LPSP3006Z	〃	Phones Bracket x 2 Control Bracket x 2	4
63		SBSF3010C	Tap. Screw	Side Bracket x 2 Phones Bracket x 2 LED x 2 Mecha.～Amp.～F. Cover x 5	11
64		SBSF3010Z	〃	Front Cover x 2 Top Cover x 5	7
65		SDSP3006R	Screw	Door Bracket x 2 Mecha.～Amp.～F. Cover x 2 Bottom Cover x 2 Top Cover x 7	13
66		SPSP3006V	〃	Mecha. ～ Main Board	2

PC-R3 Tuner P.W. Board Parts


T. STEREO
D3
S
POWER
R
D4
Q
001D
D5
R20
R36
R37
C49
C48
C46
C47
LPF
C39
R35
IC2
16
8
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VR2
SEP adj
C44
Q5
B
E
R59
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LED ST ⊕
R34
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C43
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C45
LCH
C53
Q7
R53
Q8
R51
R52
D2
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R54
R40
19KHz Adj
VR1
R38
C38
C25
C52
R62
N
C74
C67
L5
LED FOR TUNING ⊕
R58
C34
Q6
LED FOR TUNING ⊖
C23
C24
C72
R30
R24
TC-8
(SW2 OSC)
L6
C69
M
SW1 OSC
R63
R70
R21
R8
R56
S1-2
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T2 (FM DET)
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R26
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C28
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C66
TC-5 (MW)
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ANT MW ⊕
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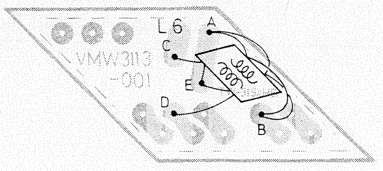
(MW OSC)
L4
TC-6
C65
C61
C
S2-3
H
S2-4
C29
C27
C18
S3-3
S3-1
SW1 or LW
IC1
10
18
9
C51
R18
D1
C64
L
S3-5
S3-2
S3-4
S3-6
C63
G
L10
R16
R17
C20
C19
C21
C70
C58
C10
(FM OSC)
L2
L9
S4-2
S4-1
SW2
S4-4
C35
C36
C22
CFT (AM IF)
C11
S4-3
C16
C37
C12
C14
C3
L1
FM RF
C4
C32
S5-1
MUTE
S5-2
C17
C15
C13
Q3
R11
C9
C6
L3
R1
R4
R2
C31
R55
A
B
C30
VMW2178-101A
R57
CF2
R12
C8
C7
R7
R33
R6
Q2
Q1
C1
C57
CF1
Q4
R13
C33
T1
R9
C59
BPF1
CN3-P
EARTH
LCH OUT
RCH OUT
⊕ B
R14
R5
R10
FM IF
E

Terminal


L6
A
VMW3113
-001
C
E
D
B

▨ +B

■ Earth

Fig. 51

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Tuner P.W. Board Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
		VMW2178-101A	P.W. Board		1
VC1,2,3,4		QAP1224-520	V. Capacitor		1
TC1,2,3,4					
TC5,6,7,8		QAT2002-001	T. Capacitor		2
VC5		QAT5001-003	M.V. Capacitor		1
VR1		QVZ3512-103	V. Resistor		1
VR2		QVP8A0B-024	〃		1
S1-1～S5		QST2541-V02	Push Switch		1
L1		VQF1B12-003	FM. RF. Coil		1
L2		V03105-029	FM. OSC Coil		1
L3		03226-1K	Inductor		1
L4		VQM1S02-303	OSC Coil	AM	1
L5		VQL1S02-201	〃	LW	1
L6		VQS1S02-301	〃	SW	1
L7,8		VQB014B-302	Bar Antenna		1
L9		VQR1001-202	RF. Coil	SW	1
L10		V03047-17	Inductor		1
T1,2		VQT7F12-104	IFT	FM	2
T3,4 CF3		VQT7A31-101	〃	AM	1
		VYH4369-003	Shield Case		1
LPF1		VQZ0011-001	L.P. Filter		1
BPF1		VBP2M3E-001	B.P. Filter		1
CF1		VCF2N3B-303	C. Filter		1
CF2		〃	〃		1
IC1		AN7222N	IC		1
IC2		AN7410N	〃		1
Q1,2		2SC535 (B)	Transistor		2
Q3		2SA838 (C)	〃		1
Q4		2SC930 (E)	〃		1
Q5		2SC536 (E,F)	〃		1
Q6,7,11,12		2SC536 (F)	〃		4
Q8		2SA608 (F,G)	〃		1
Q9,10		2SC2001 (L,K)	〃		2
D1		MA345	Varicap		1
D2		MA165	Si. Diode		1
D6,7		1S2076	〃		2
		QMV5005-003	Connector		1
C1,7,8,10,22 31,32,33,71		QCF11HP-103	C. Capacitor	0.01 μF 50 V	9
C3,66		QCS11HJ-240	〃	24 pF 〃	2
C4,9		〃 -3R0	〃	3pF 〃	2
C5,70		〃 -150	〃	15 pF 〃	2
C6		〃 -331	〃	330 pF 〃	1
C11		〃 -7R0	〃	7 pF	1
C12		QCT05CH-120	〃	12 pF	1
C13		QCT05WK-200	〃	20 pF	1
C14,73		QCT05CH-100	〃	10 pF 50 V	2
C15,35,36		QCF11HP-223	〃	0.022 μF 〃	3
C16,45,80		QCC11EM-223	〃	0.022 μF 〃	3
C17,19		QET41AR-476	E. Capacitor	47 μF 10 V	2
C18,30		QCC11EM-103	C. Capacitor	0.01 μF 25 V	2
C20		QEN41CA-475N	E. Capacitor	4.7 μF 16 V	1
C21,38,76		QET41HR-105	〃	1 μF 50 V	3
C23		QET41AR-106	〃	10 μF 10 V	1
C24		QET41ER-106	〃	〃 25 V	1
C25		QET41AR-477	〃	470 μF 10 V	1
C26,43		QET41HR-335	〃	3.3 μF 50 V	2
C27		QCS11HK-221	〃	220 pF 〃	1
C29,39,78		QCC11EM-473	〃	0.047 μF 25 V	3
C34,46,47		QFM41HJ-123	M. Capacitor	0.012 μF 50 V	3
C37		QCT05CH-180	C. Capacitor	18 pF 〃	1

Ref. No.	⚠	Parts No.	Parts Name	Remarks		Q'ty
C40,75		QET41AR-107	E. Capacitor	100 μF	10 V	2
C41,42,44		QET41HR-474	〃	0.47 μF	50 V	3
C43		〃 -335	〃	3.3 μF	〃	1
C48,53,54,55		〃 -475	〃	4.7 μF	〃	4
C49,56		QET41ER-475	〃	4.7 μF	25 V	2
C50		QFS41HJ-471	P. Capacitor	470 pF	50 V	1
C51,77		QFM41HJ-103	M. Capacitor	0.01 μF	〃	2
C52,57,72		QCS11HJ-151	C. Capacitor	150 pF	〃	3
C58,59		〃 -100	〃	10 pF	〃	2
C60		〃 -330	〃	33 pF		1
C61		〃 -6R0	〃	6 pF	〃	1
C63,68		〃 -200	〃	20 pF	〃	2
C64		QCT05WK-100	〃	10 pF		1
C65		QFS41HJ-361	P. Capacitor	360 pF	50 V	1
C67		〃 -151	〃	150 pF	〃	1
C69		〃 -392	〃	0.0039 μF	〃	1
C74		QCS11HJ-390	C. Capacitor	39 pF	〃	1
C79		QCC11EM-104	〃	0.1 μF	25 V	1
C81,82		QCS11HJ-5R0	〃	5 pF	50 V	2
R1,6		QRD161J-334	C. Resistor	330 kΩ	1/6 W	2
R2		QRD141J-102S	〃	1 kΩ	1/4 W	1
R3		〃 -221S	〃	220 Ω	〃	1
R4,5,15,21 57		QRD161J-101	〃	100 Ω	1/6 W	5
R7,27		〃 -102	〃	1 kΩ	〃	2
R8,67		QRD141J-560S	〃	56 Ω	1/4 W	2
R9		QRD161J-181	〃	180 Ω	1/6 W	1
R10		QRD143J-221S	〃	220 Ω	1/4 W	1
R11		QRD161J-474	〃	470 kΩ	1/6 W	1
R12,30		〃 -392	〃	3.9 kΩ	〃	2
R13		〃 -184	〃	180 kΩ	〃	1
R14		QRD141J-561S	〃	560 Ω	1/4 W	1
R16,36,50		QRD161J-472	〃	4.7 kΩ	1/6 W	3
R17,26,35,59		〃 -471	〃	470 Ω	〃	4
R18,19,55		〃 -104	〃	100 kΩ	〃	3
R20		〃 -151	〃	150 Ω	〃	1
R24,25		〃 -222	〃	2.2 kΩ	〃	2
R28,39,40,43 44		〃 -183	〃	18 kΩ	〃	5
R29		〃 -333	〃	33 kΩ	〃	1
R31		〃 -564	〃	560 kΩ	〃	1
R32		〃 -473	〃	47 kΩ	〃	1
R33		QRD141J-474S	〃	470 kΩ	〃	1
R34		QRD143J-273S	〃	27 kΩ	〃	1
R37		QRD141J-472S	〃	4.7 kΩ	〃	1
R38,54		QARD161J-103	〃	10 kΩ	〃	2
R41,42,51,52		〃 -562	〃	5.6 kΩ	〃	4
R45,56		〃 -121	〃	120 Ω	〃	2
R47,48		〃 -684	〃	680 KΩ	〃	2
R49		QRD143J-472S	〃	4.7 kΩ	〃	1
R53		QRD161J-683	〃	68 kΩ	〃	1
R56		QRD141J-471S	〃	470 Ω	1/4 W	1
R58		QRD161J-224	〃	220 kΩ	1/6 W	1
R60		QRD141J-334S	〃	330 kΩ	1/4 W	1
R61		QRD161J-561	〃	560 Ω	1/6 W	1
R62		〃 -470	〃	47 Ω	〃	1
R63		〃 -122	〃	1.2 kΩ	〃	1
R65		〃 -152	〃	1.5 kΩ	〃	1
R66		QRD141J-680S	〃	68 Ω	1/4 W	1
R68		〃 -101S	〃	100 Ω	〃	1
R69		〃 -103S	〃	10 kΩ	〃	1
R70		QRD161J-154	〃	150 kΩ	〃	1

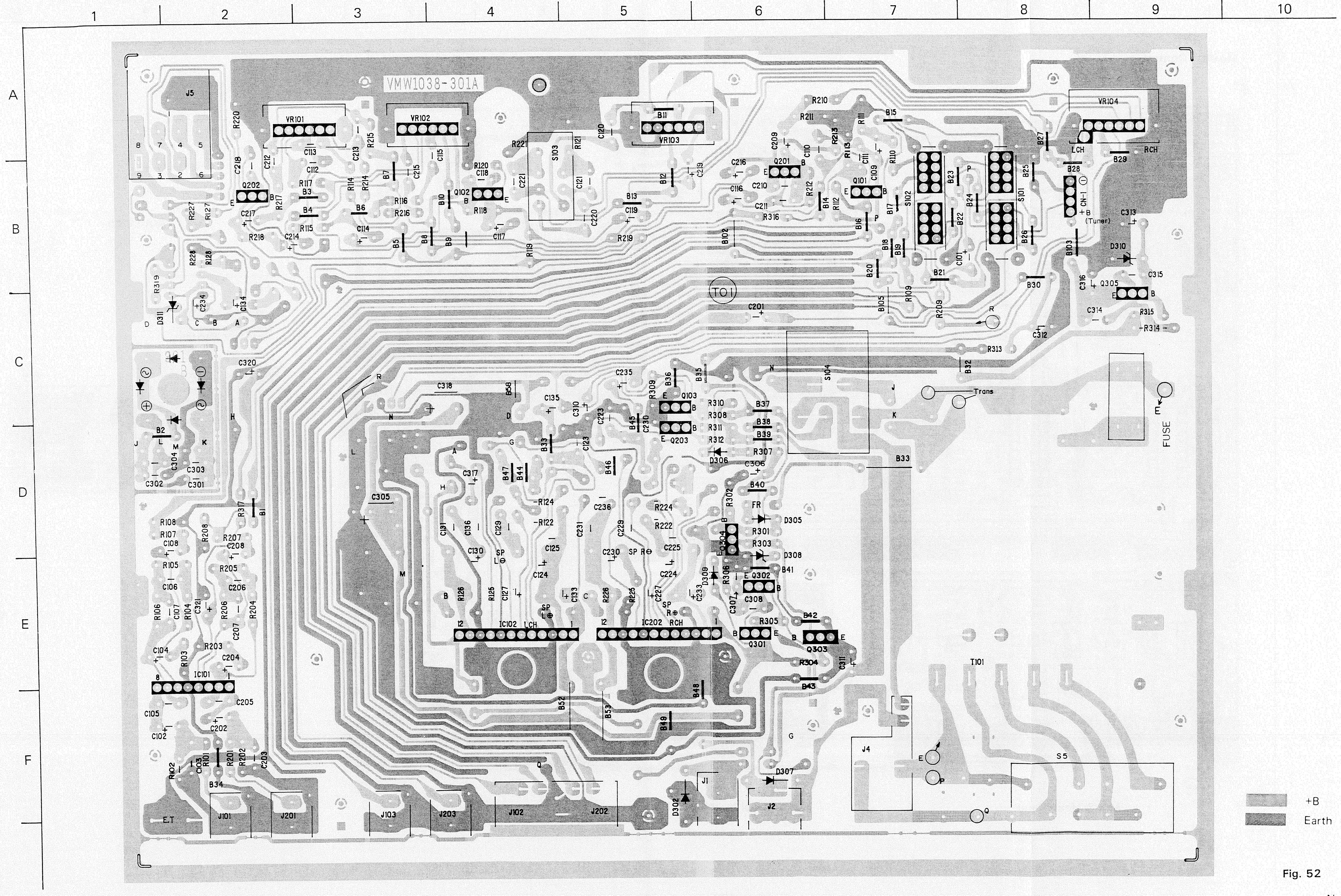
PC-R3 Amplifier P.W. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
	⚠	VMW1038-XXX	P.W. Board	No supply as parts ass'y	1
S101-1~4		QSL4309-024	Lever Switch		1
S102-1~4		QSL4209-022V	〃		1
S103-1~2		QSP0219-055	Push Switch		1
S104-1~2		QSP2111-011	〃		1
VR101-1~2 102-1~2		QVD4A6B-115	V. Resistor	100 kΩ	1
VR103-1~2		QVD4A6M-154	〃	50 kΩ BALANCE	1
VR104-1~2		QVN3A6B-054	〃	50 kΩ VOLUME	1
J1		QMA0921-006H	DC Jack		1
J2		QMA1221-004	〃		1
J4, S5	⚠	QMC0263-002BS	AC Socket	PC-R3LB	1
		〃 -002	〃	PC-3RL	1
J5		QMS6313-007	Headphone Jack		1
J101,103		VMC0002-002	Pin Jack		2
J201, 203		〃 -001	〃		2
J102, 202		VMJ3005-001	Pin Jack Ass'y		1
ET		VMZ0001-001	Earth Terminal		1
S5	⚠	QSS2325-104BS	Slide Switch	PC-R3LB	1
		〃 -104	〃	PC-R3L	1
Q101,201,102 202		2SC945L(P)	Transistor		4
Q103,203,303 304		2SD636 (R, S)	〃		4
Q301		2SB511(E)HP-S	〃		1
Q302		2SC945(P,Q)	〃		1
Q305		2SD468(B)	〃		1
D302,307		10E1-B	Si. Diode		2
D305,306		1S2076	〃		2
D308		HZ12B1	Zener Diode		1
D309		KB262	Varistor		1
D310		HZ9A2L	Zener Diode	or HZ9A1L	1
IC101		BA328	IC		1
IC102		UPC4557C	〃		1
IC201, 202	⚠	AN7156N	〃		2
FR	⚠	QRH141J-2R2	Fusible Resistor	2.2 Ω 1/4 W	1
	⚠	A44594-001	Fuse Clip		2
C101,201		QET41HR-476	E. Capacitor	47μF 50 V	2
C102,202		QET41CR-106	〃	10μF 16 V	2
C103,203		QCS11HJ-501	C. Capacitor	500 pF 50 V	2
C104,204,321		QET41ER-476	E. Capacitor	47 μF 25 V	3
C105,205		QCF11HP-102	C. Capacitor	0.001μF 50 V	2
C106,206		QFM41HJ-822	M. Capacitor	0.0082μF 〃	2
C107,207		〃 -273	〃	0.027μF 〃	2
C108,208		QET41ER-105	E. Capacitor	1 μF 25 V	2
C109,209		QEB41HM-224M	〃	0.22 μF 50 V	2
C110,210		QCS11HJ-301	C. Capacitor	300 pF 〃	2
C111,211		〃 -331	〃	330 pF 〃	2
C112,212,113 213		QFM41HJ-563	M. Capacitor	0.056 μF 〃	4
C114,214,117 217,135,235		QET41HR-475	E. Capacitor	4.7 μF 〃	6
C115,215		QFM41HJ-152	M. Capacitor	0.0015 μF 〃	2
C116,216		QET41HR-335	E. Capacitor	3.3 μF 〃	2
C118,218		QCS11HJ-151	C. Capacitor	150 pF 〃	2
C119,219,122 222		QET41HR-105	E. Capacitor	1μF 〃	2
C120,220		QCY41HK-122	C. Capacitor	0.0012 μF 〃	2
C121,221,307 308		QCC11EM-104	C. Capacitor	0.1 μF 25 V	4

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
C123,223		QCS11HJ-471	C. Capacitor	470 pF 50 V	2
C124,224		QEH41ER-107	E. Capacitor	100 μF 25 V	2
C125,225,131 231		ECQE1224JNW	T.F. Capacitor	or QFV81HJ-224	4
C126,226,130 230		QFM41HJ-103	M. Capacitor	0.01μF 50 V	2
C127,227,128 228		QET41AR-476	E. Capacitor	47 μF 10 V	2
C129,229,318		″ -107	″	100 μF ″	3
C132,133,232 233		QET41CR-228	E. Capacitor	2200 μF 16 V	4
C134,234		QET41ER-226	E. Capacitor	22μF 25 V	2
C305		″ -478	E. Capacitor	4700 μF ″	1
C306		QEB41HM-154	E. Capacitor	0.15 μF 50 V	1
C310		QET41CR-337	″	330 μF 16 V	1
C311		″ -108	″	1000 μF ″	1
C312		QET41ER-477	″	470 μF 25 V	1
C313		″ -227	″	220 μF ″	1
C314,315		QCC11EM-223	C. Capacitor	0.022 μF ″	2
C316		QET41AR-477	E. Capacitor	470 μF 10 V	1
C317		QET41ER-228	″	2200μF 25 V	1
C320		QET41CR-477	″	470 μF 16 V	1
C322		QET41ER-106	″	10 μF 25 V	1
C324		QCF11HP-223	C. Capacitor	0.022 μF 50 V (PC-R3WH)	1
R101,201		QRD161J-182	C. Resistor	1.8 kΩ 1/6W	2
R102,202,319 320		″ -473	″	47 kΩ ″	4
R103,203		″ -820	″	82 Ω ″	2
R104,204,307		″ -102	″	1 kΩ ″	3
R105,205,107 207,114,214 115,215,117 217,304,311 312		″ -103	″	10 kΩ ″	13
R106,206		″ -124	″	120 kΩ ″	2
R108,208		″ -223	″	22 kΩ ″	2
R109,209,121 221		″ -222	″	2.2 KΩ ″	4
R110,210,116 216,303,310 703		″ -472	″	4.7 kΩ ″	7
R111,211,301 302,321,322		″ -104	″	100 kΩ ″	6
R112,212		″ -334	″	330 kΩ ″	2
R113,213,119 219		″ -392	″	3.9 kΩ ″	4
R118,218		QRD161J-684	″	680 kΩ ″	2
R120,220		″ -681	″	680 Ω ″	2
R122,222,126 226	⚠	QRH141J-2R2	Fusible Resistor	2.2 Ω 1/4 W	4
R123,223,125 225,305,317		QRD161J-331	″	330 Ω 1/6 W	6
R124,224		″ -153	″	15 kΩ ″	2
R127,227		″ -682	″	6.8 kΩ ″	2
R128,228		″ -330	″	33 Ω ″	2
R306		″ -152	″	1.5 kΩ ″	1
R308		″ -100	″	10 Ω ″	1
R309		″ -332	″	3.3 kΩ ″	1
R313	⚠	QRD141J-101S	″	100 Ω 1/4 W	1
R314	⚠	-150S	″	15 Ω ″	1
R315		QRD161J-221	″	220 Ω 1/6 W	2
R316		″ -101		100 Ω ″	1
<Det. P.W. Board>					
		VMW1038-XXX	P.W. Board		1
C301~304	⚠	QCF11EZ-473	C. Capacitor	0.047 μF 50 V	4
D301~304	⚠	DS5BN-L	Si. Diode		4

PC-R3 Amplifier P.W. Board Parts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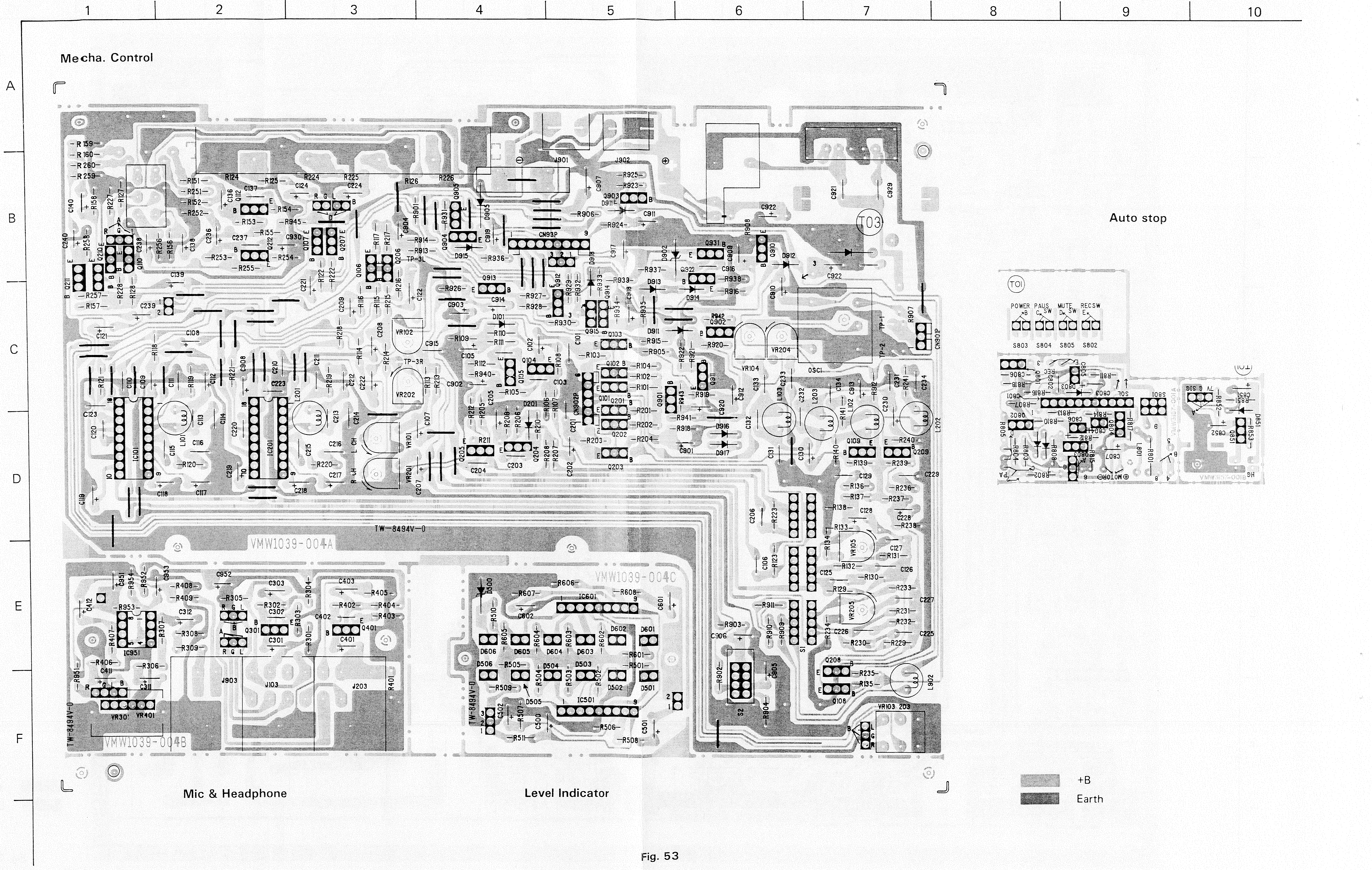
VMW1038-301A
J5
VR101
VR102
VR103
VR104
S101
S102
S103
S104
Q101
Q102
Q103
Q201
Q202
Q203
Q301
Q302
Q303
Q304
Q305
IC101
IC102 LCH
IC202 RCH
CN-1
+B (Tuner)
LCH
RCH
TO1
Trans
FUSE
T101
J1
J2
J4
S5
J101
J102
J103
J201
J202
J203
E.T
D302
D305
D306
D307
D308
D309
D310
D311
SP L⊖
SP L⊕
SP R⊖
SP R⊕
C305
C318
C320
R313
R314
R315
B33
B103
B105
+B
Earth

Fig. 52

PC-D3 Cassette Amplifier and Mecha. Control P.W. Board Parts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A
B
C
D
E
F
Mecha. Control
Auto stop
Mic & Headphone
Level Indicator
+B
Earth
VMW1039-004A
VMW1039-004B
VMW1039-004C
TW-8494V-0
IC101
IC201
IC501
IC601
IC951
VR101
VR102
VR103
VR104
VR105
VR201
VR202
VR204
VR205
VR301
VR401
J103
J203
J901
J902
J903
CN901P
CN902P
CN903P
T03
T01
OSC
POWER
PAUS
MUTE
RECSW
S802
S803
S804
S805
S1
S2
L101
L201
L202
L801
L902
TP-1
TP-2
TP-3L
TP-3R
MOTOR

Fig. 53

PC-D3
Cassette Amplifier P.W. Board Parts List

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
		VMW1039-004A	P.W. Board	No supply as parts ass'y	1
S1-1~6		QSL6309-001	Lever Switch		1
S2		QSL2309-003	〃		1
S3		QSS1301-001	Slide Switch		1
S4-1~2		QSP2210-061	Push Switch		1
J101,201,102 202		VMJ3004-003	Pin Jack		1
J901		QMA1221-004	DC Jack		1
J902		QMA0921-005	〃		1
J903		QMC9014-006	DIN Jack		1
OSC1		VGC0002-001	OSC Block		1
L101,201,103 203		VQP0001-183S	Inductor		4
L102,202		VQP0001-562S	〃		
L902		〃 -102S	〃		1
IC101, 201		AN7363	IC		2
Q101,201,102 202		2SC1845(E,U)	Transistor		4
Q103,203,106 206,107,111 207,211,108 208,911~915 922		2SC945(P,Q)	〃	or 2SC2785(H,F,E)	16
Q104,204,105 205		2SC1843(F,E)	〃	〃	4
Q109,209		2SC923(U)	〃	or 2SC1841(U)	2
Q112,212		2SC1843(F)	Transistor		2
Q901		2SA992(E,F)	〃		1
Q902,903,904		2SA733A(P,K)	〃	or 2SA1175(H,F,E)	3
Q905		2SB894(Q,R)	〃		1
Q910,110,210		2SD1020(H,F,E)	〃		3
Q931		2SB772(Q,P)	〃		1
D902		HZ7B2	Zener Diode		1
D905		10E1	Si. Diode		1
D101,201 911~919		MA165	〃		11
VR101,201		QVP8A0B-024	V. Resistor	20 kΩ, P.B. Level	2
VR102,202		〃 -024	〃	20 kΩ, Rec. Level	2
VR103,203		QVL4A7A-054V	〃	50 kΩ, Input	2
VR104,204		QVP8A0B-015	〃	100 kΩ, Bias	2
VR105,205		〃 -015	〃	100 kΩ, Rec. EQ	2
R101,201,932 128,228,152 252		QRD161J-822	C. Resistor	8.2 KΩ 1/6 W	7
R102,202,104 204,125,225 938,155,255		〃 -332	〃	3.3 kΩ 〃	9
R103,203		〃 -100	〃	10 Ω 〃	2
R105,205,920		〃 -823	〃	82 kΩ 〃	3
R106,206,111 211,915,924		〃 -101	〃	100 Ω 〃	6
R107,207		〃 -682	〃	6.8 kΩ 〃	2
R108,208,935		〃 -334	〃	330 kΩ 〃	3
R109,209,121 221,905		〃 -152	〃	1.5 kΩ 〃	5
R110,210,159 259,939		〃 -224	〃	220 kΩ 〃	5
R112,212,139 239,902,903 914,929,943		〃 -103	〃	10 kΩ 〃	9

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
R113,213,117 217,127,227 130,230,136 236,942		″ -223	″	22 kΩ ″	11
R114,214,919 931		″ -333	″	33 kΩ ″	4
R115,215,141 241,941,911		″ -151	″	150 Ω ″	6
R116,216,124 224,133,233		QRD161J-393	C. Resistor	39 kΩ 1/6 W	6
R118,218,119 219,122,222 123,223,135 235,904,913 916,921,926 936,940		″ -472	″	4.7 kΩ ″	17
R120,220		″ -680	″	68 Ω ″	2
R126,226,131 231,134,234 937		″ -473	″	47 kΩ ″	7
R129,229,132 232		″ -683	″	68 kΩ ″	4
R137,237		″ -564	″	560 kΩ ″	2
R138,156,157 158,238,256 257,258,923 925,927,928 930,934		″ -104	″	100 kΩ ″	14
R140,240		″ -122	″	1.2 kΩ ″	2
R935		″ -334	″	330 Ω ″	1
R901		″ -471	″	470 Ω ″	1
R906	⚠	QRH141J-100	F.R. Resistor	10 Ω 1/4 W	1
R907		QRD161J-1R0	C. Resistor	1 Ω 1/6 W	1
R908,918		″ -222	″	2.2 kΩ ″	2
R909		″ -560	″	56 Ω ″	1
R910		″ -181	″	180 Ω ″	1
R151,160,251 260,912,922 933,945		″ -102	″	1 kΩ ″	8
R153,253		″ -105	″	1 MΩ ″	2
R154,254		″ -121	″	120 Ω ″	2
C101,201		QFM41HJ-102	M. Capacitor	0.001 μF 50 V	2
C102,202		QEB41EM-106	E. Capacitor (Low Leak)	10 μF 25 V	2
C103,203		QCS11HJ-101	C. Capacitor	100 pF 50 V	2
C104,204		″ -680	″	68 pF ″	2
C105,205,901 902,910,912 914,918		QET41HR-106	E. Capacitor	10 μF ″	8
C106,206,111 211		QFM41HJ-103	M. Capacitor	0.01 μF ″	4
C107,207		QET41HR-475	E. Capacitor	4.7 μF ″	2
C108,208,109 209		QEB41HM-334	E. Capacitor (Low Leak)	0.33 μF ″	4
C110,126,137 210,226,237		QCS11HJ-471	C. Capacitor	470 pF ″	6
C112,212,139 140,239,240		QET41HR-474	E. Capacitor	0.47 μF ″	6
C113,213,132 232		QCS11HJ-271	C. Capacitor	270 pF ″	4
C114,127,214 227		QFM41HJ-152	M. Capacitor	0.0015 μF ″	4
C115,215		″ -272	″	0.0027 μF ″	2
C116,216		″ -683	″	0.068 μF ″	2

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
C117,217		QEB41HM-104M	E. Capacitor (Low Leak)	0.1 µF ″	2
C118,218		QEB41EM-475M	″	4.7 µF 25 V	2
C119,219,908 913		QET41AR-107	E. Capacitor	100 µF 10 V	4
C120,220		QFM41HJ-182	M. Capacitor	0.0018 µF 50 V	2
C121,122,124 128,130,136 138,221,222 224,228,230 236,238,911 922		QET41HR-105	E. Capacitor	1 µF ″	16
C123,223		QCS11HJ-331	C. Capacitor	330 pF ″	2
C125,133,225 233		″ -181	″	180 pF ″	4
C131,231		″ -102	″	0.001 µF ″	2
C929		QFM41HJ-222	M. Capacitor	0.0022 µF ″	1
C129,229		″ -104	″	0.1 µF ″	2
C134,234		QFM41HJ-153	M. Capacitor	0.015 µF 50 V	2
C903		QET41CR-107	E. Capacitor	100 µF 16 V	1
C904,905,906 930		QET41AR-476	″	47 µF 10 V	4
C907		QET41CR-228	″	2200 µF 16 V	1
C915,921		QFM41HJ-682	M. Capacitor	0.0068 µF 50 V	2
C916		QCC11EM-104	C. Capacitor	0.1 µF 25 V	1
C917,920		QET41AR-108	E. Capacitor	1000 µF 10 V	2
C919		QET41ER-476	″	47 µF 25 V	1
		VMZ0015-001	Post Pin		4
CN903P		″ -009	″		1
V43895-1		V43895-1	Tab	for Battery	2

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

PC-D3 Mecha. Control P.W. Board Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
		VMW3157-001A	P.W. Board	No supply as parts ass'y	1
IC801		LA2000	IC	or BA335	1
Q801,802,803 804		2SC2785(H,F,E)	Transistor	or 2SC945L(P,Q)	4
D801,802,803		MA165	Si. Diode		3
		QST3101-V02	Push Switch	for Rec Mute	1
L801		T41572-001	Inductor		1
R801	⚠	QRD149J-1R0S	C. Resistor	1 Ω 1/4 W	1
R802		QRD143J-103S	″	10 kΩ ″	1
R803,811,817		QRD161J-103	″	10 kΩ 1/6 W	3
R804,807		″ -473	″	47 kΩ ″	2
R805,806		″ -104	″	100 kΩ ″	2
R808		QRD143J-224S	″	220 kΩ 1/4 W	1
R809,816		QRD161J-394	″	390 kΩ 1/6 W	2
R810		QRD143J-473S	″	47 kΩ 1/4 W	1
R812,814		QRD161J-274	″	270 kΩ 1/6 W	2
R813		″ -224	″	220 kΩ ″	1
R815		″ -184	″	180 kΩ ″	1
R816		″ -474	″	470 kΩ ″	1
R818		QRD143J-333S	″	33 kΩ 1/4 W	1
C801		QFM41HJ-222	M. Capacitor	0.0022 µF 50 V	1
C802		″ -823	″	0.082 µF ″	1
C803		″ -223	″	0.022 µF ″	1
C804		QET41HR-335	E. Capacitor	3.3 µF ″	1
C805		″ -106	″	10 µF ″	1
C806		QET41AR-107	″	100 µF 10 V	1
C807		QET41CR-107	″	100 µF 16 V	1
C808		QET41HR-475	″	4.7 µF 50 V	1

Auto Stop P.W. Board Ass'y

Ref. No.		Parts No.	Parts Name	Remarks	Q'ty
		VMW3157-001B	P.W. Board	No supply as parts ass'y	1
HG		VHE610G	H. Element		1
Q851		2SC2785(H,F,E)	Transistor	or 2SC945L(P,Q)	1
D851		MA165	Si. Diode		1
R851		QRD161J-681	C. Resistor	680 Ω 1/6 W	1
R852		″ -223	″	22 kΩ ″	1
R853		″ -224	″	220 kΩ ″	1
C851,852		QET41AR-107	E. Capacitor	100 µF 10 V	2
C853		QET41HR-106	″	10 µF 50 V	1
S803~805		VSH1121-001	Switch Ass'y		3
S802		VSH1105-003	″		1

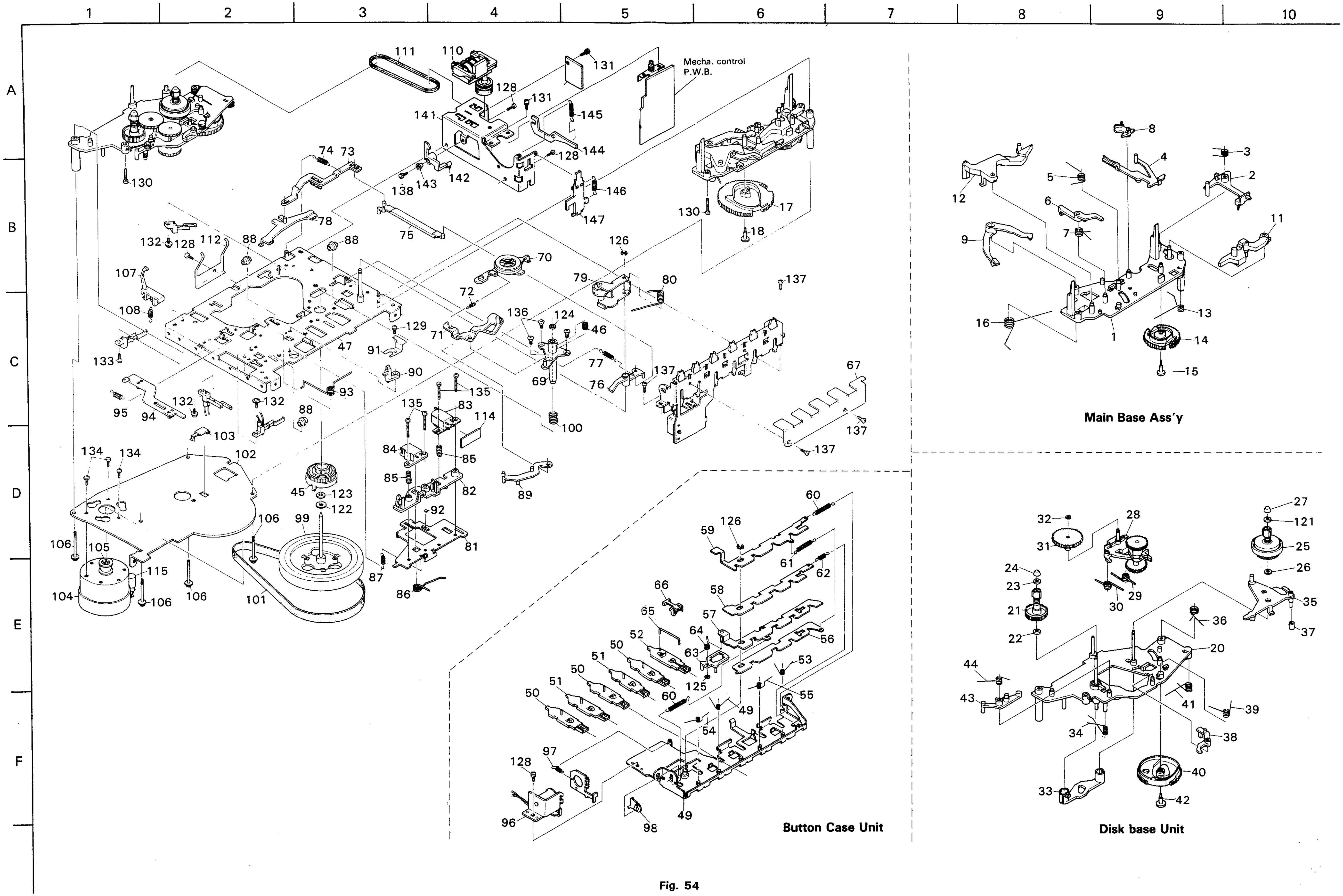
Level Indicator P.W. Board Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
		VMW1039-003C	P.W.Board	No supply as parts ass'y	1
IC501,601		BA6124	IC		2
D501-506 601-606		LN12177P	LED Ass'y		1
D500		HZ5B	Zener Diode		1
R501-505 601-605		QRD161J-331	C. Resistor	330 Ω 1/6 W	10
R506,606		″ -332	″	3.3 kΩ ″	2
R507,607,510		″ -103	″	10 kΩ ″	3
R508,608		″ -822	″	8.2 kΩ ″	2
R509		″ -271	″	270 Ω ″	1
R511		″ -101	″	100 Ω ″	1
C501,601		QET41HR-105	E. Capacitor	1 µF 50 V	2
C502,602,500		″ -106	″	10 µF ″	3

Mic/Phones P.W. Board Parts List

Ref. No.	⚠	Parts No.	Parts Name	Remarks	Q'ty
		VMW1039-003B	P.W. Board	No supply as parts ass'y	1
J103		QMS6313-007	Mic Jack		1
J203		QMS6311-004	″		1
J903		QMS6302-109	Headphone Jack		1
IC951		UPC4557C	IC		1
Q301,401		2SC1843(F)	Transistor		2
VR301,401		QVN3A6A-024M	V. Resistor	20 kΩ	1
R301,401		QRD161J-472	C. Resistor	4.7 kΩ 1/6 W	2
R302,402		″ -105	″	1 MΩ ″	2
R303,403,309 409		″ -330	″	33 Ω ″	4
R304,404		″ -332		3.3 kΩ ″	2
R305,405,307 407,953,954		″ -473	″	47 kΩ ″	6
R306,406		″ -183	″	18 kΩ ″	2
R308,408		″ -331	″	330 Ω ″	2
R951		QRH141J-100	F. Resistor	10 Ω 1/4 W	1
R952		QRD161J-102	C. Resistor	1 kΩ 1/6 W	1
C301,401		QET41HR-335	E. Capacitor	3.3 µF 50 V	2
C302,402		QCS11HJ-471	C. Capacitor	470 pF ″	2
C303,403,311 411		QET41HR-105	E. Capacitor	1 µF ″	4
C312,412,951 952		″ -476	″	47 µF ″	4
C953		QET41AR-476	″	47 µF 10 V	1

Mechanical Component Parts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Main Base Ass'y
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Button Case Unit
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Disk base Unit

Fig. 54

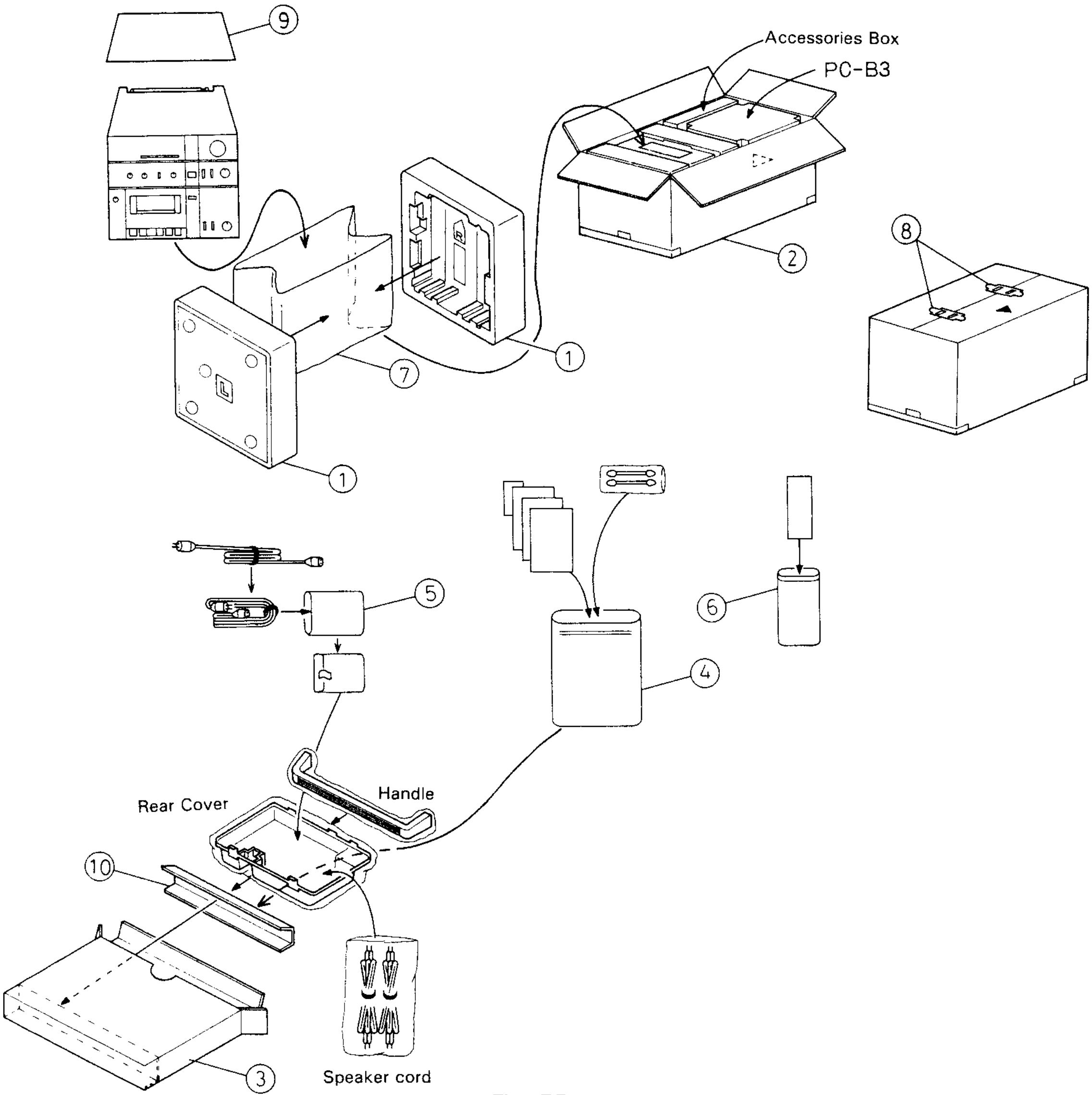
Mechanical Component Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VKS2115-001	Main Base		1
2	VKS4400-001	Pause Trigger		1
3	VKW3006-026	Spring	Pause Trigger	1
4	VKS4401-001	FF Lever		1
5	VKW3006-027	Spring	FF Lever	1
6	VKS4402-001	Play Trigger		1
7	VKW3006-028	Spring	Play Trigger	1
8	VKS4403-001	FR Safety		1
9	VKS4404-001	Rew Lever		1
10	VKW3006-029	Spring	Rew Lever	1
11	VKS4405-00A	Pause Arm Ass'y		1
12	VKS4483-00A	Play Arm Ass'y		1
13	VKW4333-001	Spring	Pause Cam	1
14	VKS3147-001	Pause Cam		1
15	VKS4410-002	Lock Bush	Pause Cam	1
16	VKW4334-001	Spring	Play Cam	1
17	VKS4411-002	Play Cam		1
18	VKS4410-002	Lock Bush	Play Cam	1
20	VKS2117-00A	Disk Base Ass'y		1
21	VKR4265-00A	Supply Reel Ass'y		1
22	VKZ4003-003	Felt	Back Tension	1
23	VKR4170-001	Ring		1
24	VKS4131-001	Reel Stopper		1
25	VKR4267-00A	Take-up Reel Ass'y		1
26	VKR4170-001	Ring		1
27	VKS4131-001	Reel Stopper		1
28	VKS3148-00A	FR Base Ass'y		1
29	VKW3006-031	Spring	FF	1
30	VKW3006-032	Spring	Rew	1
31	VKR4271-001	Rew. Gear		1
32	VKZ4004-001	Special Washer	Rew Gear	1
33	VKS4413-001	FR Stopper		1
34	VKW3006-033	Spring	FR Base	1
35	VKS4414-00A	FR Arm Ass'y		1
36	VKW3006-034	Spring	FR Arm	1
37	VKH3005-045	Collar	〃	1
38	VKS4416-001	FR Trigger		1
39	VKW3006-035	Spring	FR Trigger	1
40	VKS4417-001	FR Cam		1
41	VKW3006-036	Spring	FR Cam	1
42	VKS4410-002	Lock Bush	〃	1
43	VKS4418-001	Return Lever		1
44	VKW3006-045	Spring	Return Spring	1
45	VKR4272-00A	FW. Gear Ass'y		1
46	VKR4276-001	Roller		1
47	VKL3352-00A	Chassis Base Ass'y		1
49	VKL3354-00A	Button Case Ass'y		1
50	VKS4420-00A	Button Ass'y		3
51	VKS4420-00B	〃		2
52	VKS3145-001	Pause Button		1
53	VKW4345-002	Spring		1
54	〃 -001	〃		1
55	VKW4326-001	〃		2
56	VKL3355-001	Rec Cam		1
57	VKL5125-00A	Main Cam Ass'y		1
58	VKL3357-001	Sub Cam		1
59	VKL3358-001	Switch Cam		1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
60	VKW3002-094	Tension Spring	Switch Cam Main Cam	2
61	″ -100	″	Switch Cam ~ Rec. Cam	1
62	″ -095	″	Sub Cam	1
63	VKS4422-001	Select Arm		1
64	VKW4340-001	Spring	Select Arm	1
65	VKW4327-001	Wire		1
66	VKS4423-001	Wire Stopper		1
67	VKL5220-001	Button Bracket		1
69	VKF4115-00A	Capstan Metal Ass'y		1
70	VKS4424-00A	Take-up Idler Ass'y		1
71	VKS4427-001	Pause Arm		1
72	VKW3002-096	Tension Spring	Take-up	1
73	VKS4428-002	Brake Arm (1)		1
74	VKW3002-097	Tension Spring	Brake Arm (1)	1
75	VKS4429-001	Brake Lever		1
76	VKS4430-002	Brake Arm (2)		1
77	VKW3002-097	Tension Spring	Brake Arm (2)	1
78	VKS4431-002	Brake		1
79	VKP4121-00A	Pinch Roller Arm Ass'y		1
80	VKW4356-001	Pinch Roller Spring		1
81	VKL3359-001	Slide Base		1
82	VKS2119-001	Head Mount Base		1
83	VGH0421-008	R/P Head Ass'y		1
84	VGH0212-104	E Head Ass'y		1
85	VKW3001-020	Compression Spring	R/P, E. Head	2
86	VKW4342-001	Slide Base Spring		1
87	VKW3002-099	Tension Spring		1
88	VKS4432-002	Roller		3
89	VKS4433-001	Switch Arm		
90	VKS4434-001	Cassette Guide		1
91	VKY4238-001	Spring Plate		1
92	T41615-004	Stell Ball		1
93	VKW4341-001	Spring	Slide Base	1
94	VKS4435-001	Rec Lever		1
95	VKW3002-096	Tension Spring		1
96	VGP0601-012	Solenoid Ass'y		1
97	VKW3002-043	Tension Spring		1
98	VKS4436-001	Rec Arm		1
99	VKF3120-00A	Flywheel Ass'y		1
100	VKW3001-010	Spring	Thrust	1
101	VKB3001-011	Belt	Capstan	1
102	VKL3360-001	F.M. Bracket		1
103	VKS4437-001	Thrust Plate		1
104	XMI-6B2HL	D.C. Motor		1
105	VKS4139-002	Motor Pulley		1
106	VKZ4014-001	Special Screw		4
107	VKS4438-001	Rec. Safety Arm		1
108	VKW3002-039	Tension Spring	Rec S. Arm	1
110	VKC5153-001S	Tape Counter		1
111	VKB3000-028H	Belt		1
112	VKY4239-001	Pack Spring		1
114	VMW3163-001	Printed Wiring Board		1
115	QET41CR-477	E. Capacitor	470 μF 16 V	1
116	VKL5256-001	Bracket		1
117	VKL5199-002	Plate		1
121	Q03093-838	Washer		1
122	″ -627	″	Thrust	1
123	″ -827	″		1
124	″ -522	″	Oil Cut	1

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
125	REE1500	E. Ring	Select Arm	1
126	REE2500	〃	Switch Cam x 1 Pinch Roller Ass'y x 1	2
128	HPST2604Z	Screw	Solenoid Ass'y x 1 Tape Counter x 2 Pack Spring x 1	4
129	HPST2606Z	〃	Stell Ball	1
130	HPST2612Z	〃	Main Base x 1 Disk Base x 1	2
131	LPSP3004Z	〃	Auto Stop x 1 Rec Mute x 2	3
132	SBSB2006Z	〃	Switch Ass'y	3
133	SBSB2605Z	〃	〃	1
134	SPSP2603Z	〃	D.C. Motor	3
135	SPSX2010N	〃	R/P Head x 2 E. Head x 2	4
136	SPST2604Z	〃	Capstan Metal Ass'y	3
137	SSST2605Z	〃	Button Case x 2 Button Bracket x 2	4
138	LPSP2608Z	〃	Counter Bracket Ass'y	1
139	SPSK1425M	〃	Bracket	1
141	VKL3362-001	Counter Bracket		1
142	VKS4439-001	Lock Arm		1
143	VKH3001-039	Flange Collar		1
144	VKS4440-001	Eject Lever		1
145	VKW3002-063	Tension Spring	E. Button	1
146	〃 -034	〃	E. Lever	1
147	VKS4441-001	Eject Button		1

Packing


⑨
Accessories Box
PC-B3
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Rear Cover
Handle
⑩
③
Speaker cord

Fig. 55

Positions of controls and switch knobs at renew packing

BAND	: AM	TAPE MONITOR	: SOURCE
AFC	: ON	SOURCE	: TUNER
MODE	: STEREO	VOLUME	: Center
MUTE	: ON	PHONES LEVEL	: Center
TUNING	: 600 kHz	Counter	: 000
BASS	: Center	NR SYSTEM	: OFF
TREBLE	: Center	TAPE	: NORMAL
LOUDNESS	: OFF	INPUT LEVEL	: Center
BALANCE	: Center	BEAT CUT	: "1" NORMAL
POWER	: OFF		

Packing Material Parts List

Ref. No.	Parts No.	Parts Name	Remarks	Q'ty
1	VPD7006-J06	Carton	for Master PC-3LB	1
	〃 -J08	〃	〃 PC-3L	1
2	VPD7006-J07	〃	for C. Unit PC-3LB	1
	〃 -J09	〃	〃 PC-3L	1
3	VPH1241-001	Side Cushion	Left	1
4	VPH1242-001	〃	Right	1
5	VPA2005-012	Accessories Box	PC-3LB	1
	〃 -013	〃	PC-3L	1
6	VPK4115-004	Spacer		1
7	VPK4002-002	Sheet		1
8	QPGA060-05005	Poly Bag		1
9	QPGB024-03404	〃	for Inst. Book	1
10	QPGA012-01505	〃	for Cord	1
11	VND3002-003	Serial Label	PC-3LB	1
	〃 -004	〃	PC-3L	1

Accessories

⚠ parts are safety assurance parts.
When replacing those parts, make sure to use the specified one.

Parts No.	⚠	Parts Name	Remarks	Q'ty
VKL3345-003		Frame		2
VKZ4172-001		Special Screw		8
VJC1208-002		Rear Cover		1
VGT12M2-J02		Cassette Tape		1
VMP0008-001		Pin Cord		2
VMP0009-001		DC Cord		2
VMP0013-001		SPK Cord		1
VYA4001-00A		Head Cleaning Stick		1
QMP3950-183	⚠	Power Cord	PC-3L	1
QMP9017-009BS	⚠	〃	PC-3LB	1
VJH3019-00C		Handle Ass'y		1
VND3003-001		Connection Sheet		1
VND3004-001		〃		1
VNM0852-301		Instruction Book		1
VNC6305-001		Trouble Shooting		1
VNF0851-001		Features Sticker		1
QZL1002-003		Waming Label	PC-3LB	1
53866-5		Label		1
BT20013C		Guarantee Certificate	PC-3LB	1
31465-18		Mark	〃	1
VND4006-009		Caution Label		1